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(FILE 'HOME' ENTERED AT 15:06:12 ON 05 JUN 2000)
 SET COST OFF
 SET AUHELP OFF

FILE 'HCAPLUS' ENTERED AT 15:06:20 ON 05 JUN 2000

| | |
|----|--------------------|
| | E AJINOMOTO/PA,CS |
| | E AJINOMO/PA,CS |
| L1 | 6906 S E4-E10 |
| | E ISHIHARA M/AU |
| L2 | 432 S E3,E37 |
| | E YAMANAKA S/AU |
| L3 | 145 S E3,E4 |
| | E YAMANAKA SHIG/AU |
| L4 | 158 S E13 |

FILE 'REGISTRY' ENTERED AT 15:07:42 ON 05 JUN 2000

| | |
|----|------------------|
| L5 | 1 S CELLULOSE/CN |
|----|------------------|

FILE 'HCAPLUS' ENTERED AT 15:07:50 ON 05 JUN 2000

| | |
|----|--------------------------------|
| L6 | 98 S L5 AND L1-L4 |
| L7 | 229 S ?CELLULOS? AND L1-L4 |
| L8 | 50 S CELLULOS?/SC,SX AND L1-L4 |
| L9 | 247 S L6-L8 |

FILE 'REGISTRY' ENTERED AT 15:08:22 ON 05 JUN 2000

| | |
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| L10 | 5699 S 9004-34-6/CRN |
|-----|----------------------|

FILE 'HCAPLUS' ENTERED AT 15:08:42 ON 05 JUN 2000

| | |
|-----|--|
| L11 | 69392 S L10 |
| L12 | 44 S L11 AND L1-L4 |
| L13 | 254 S L9, L12 |
| L14 | 90 S L13 AND (?BACTER? OR ?MICROORG? OR MICRO(L) ORGAN?) |
| L15 | 226 S (A OR ACETOBACT?) () PASTEURIAN? |
| L16 | 519 S (A OR ACETOBACT?) () ACETI# |
| L17 | 650 S (A OR ACETOBACT?) () XYLIN? |
| L18 | 57 S (A OR ACETOBACT?) () RANCEN? |
| L19 | 44 S (S OR SARCIN?) () VENTRICUL? |
| L20 | 2 S (B OR BACTER?) () XYLOID? |
| L21 | 50971 S PSEUDOMON? |
| L22 | 7779 S AGROBACTER? |
| L23 | 9622 S RHIZOBI? |
| | E ACETOBACTER/CT |
| L24 | 2159 S E3-E73 |
| | E SARCIN/CT |
| L25 | 530 S E4-E21 |
| | E BACTERIUM/CT |
| L26 | 4419 S E3-E135 |
| | E PSEUDOMON/CT |
| L27 | 36605 S PSEUDOMON?/CT |
| | E AGROBACTER/CT |
| L28 | 4824 S E4-E25 |
| | E RHIZOBIUM/CT |
| L29 | 0 S E30E53 |
| L30 | 11 S ATCC23769 OR ATCC(L)23769 |
| L31 | 0 S FERMBP4176 OR FERM(L)(BP4176 OR BP(L)4176) |
| L32 | 44 S L13 AND L15-L31 |
| L33 | 91 S L14, L32 |
| L34 | 8 S L33 AND MICROFIBRIL? |
| L35 | 0 S L33 AND MICRO(L) FIBRIL? |
| L36 | 21632 S CHLORAMPHENICOL? |
| L37 | 19633 S ?TETRACYCLIN? |
| L38 | 5928 S PUROMYCIN? |
| L39 | 10236 S ?ERYTHROMYCIN? |

Point of Contact:
 Jan Delaval
 Librarian-Physical Sciences
 CM1 1E01 Tel: 308-4498

L40 784 S ?THIENAMYCIN?
L41 3259 S NALIDIXIC ACID
L42 0 S PROMIDIC ACID
L43 1 S PROMIDIC
L44 549 S PIPEMIDIC ACID
L45 0 S OXOLINAIC ACID
L46 751 S OXOLINIC ACID
L47 175 S PIROMIDIC ACID
L48 3418 S OFLOXACIN?
L49 1035 S ENOXACIN?

FILE 'REGISTRY' ENTERED AT 15:23:32 ON 05 JUN 2000
L50 11 S 56-75-7 OR 60-54-8 OR 53-79-2 OR 114-07-8 OR 59995-64-1 OR 38
L51 964 S (56-75-7 OR 60-54-8 OR 53-79-2 OR 114-07-8 OR 59995-64-1 OR 3

FILE 'HCAPLUS' ENTERED AT 15:25:11 ON 05 JUN 2000
L52 29508 S L50,L51
L53 1 S L33 AND L36-L49,L52
L54 1 S L33 AND ?CELL?(L)DIVI?(L)(INHIBIT? OR BLOCK?)
L55 0 S L33 AND ?CELL?(L)DIVI?(L)PREVENT?
L56 8 S L53,L54,L34

FILE 'WPIDS' ENTERED AT 15:28:57 ON 05 JUN 2000
E AJINOM/PA
L57 6123 S E6-E48
E ISHIHARA M/AU
L58 196 S E3
E YAMANAKA S/AU
L59 121 S E3,E4
L60 6430 S L57-L59
L61 182 S L60 AND ?CELLULOS?
L62 11 S L60 AND C08B015/IC, ICM, ICS, ICA, ICI
L63 42 S L60 AND C08B037/IC, ICM, ICS, ICA, ICI
L64 50 S L62,L63
L65 12 S L64 AND ?BACTER?
L66 10 S L64 AND (MICROORG? OR MICRO(L)ORGAN?)
L67 1 SEA L64 AND (V500 OR V540 OR V570)/M0,M1,M2,M3,M4,M5,M6
L68 1 S L64 AND (B04-F10? OR C04-F10? OR B04-B02B OR C04-B02B OR B04-
L69 18 S L65-L68
L70 6 S L64 AND (PASTEUR? OR ACETI OR XYLIN? OR RANCEN# OR SARCIN? OR
L71 19 S L69,L70
L72 5 SEA L71 AND (P631/M0,M1,M2,M3,M4,M5,M6 OR (B14-H01B OR
C14-H01B OR B12-G07 OR C12-G07)/MC)
L73 1 S L71 AND ?CELL?(L)DIVI?(L)(INHIBIT? OR PREVENT? OR BLOCK?)
L74 4246 S L36-L49
E CHLORAMPHENICOL/DCN
E E3+ALL/DCN
L75 363 S E2 OR 0112/DRN
E CHLORAMPHENICOL/DCN
E E4+ALL/DCN
L76 25 S E2
E TETRACYCLIN/DCN
E E4_ALL/DCN
E TETRACYCLIN/DCN
E E4+ALL/DCN
L77 650 S E2 OR 0210/DRN
E TETRACYCLIN/DCN
E E5+ALL/DCN
L78 62 S E2
E TETRACYCLIN/DCN
E E6+ALL/DCN
L79 70 S E2
E PUROMYCIN/DCN
E E3+ALL/DCN
L80 17 S E2
E ERYTHROMYCIN/DCN

L81 E E3+ALL/DCN
 580 S E2 OR 0960/DRN
 E ERYTHROMYCIN/DCN
 E E4+ALL/DCN
 L82 66 S E2
 E THIENAMYCIN/DCN
 E E3+ALL/DCN
 L83 3 S E2
 E NALIDIXIC ACID/DCN
 E E3+ALL/DCN
 L84 64 S E2 OR 1243/DRN
 E PIROMIDIC ACID/DCN
 E E3+ALL/DCN
 L85 6 S E2
 E PIPEMIDIC ACID/DCN
 E E3+ALL/DCN
 L86 15 S E2
 E OXOLINIC ACID/CN
 E OXOLINIC ACID/DCN
 E E3+ALL/DCN
 L87 36 S E2 OR 1980/DRN
 E OXOLINIC ACID/DCN
 E E4+ALL/DCN
 L88 8 S E2
 E OFLOXACIN/DCN
 E E3+ALL/DCN
 L89 70 S E2
 E OFLOXACIN/DCN
 E E4+ALL/DCN
 L90 21 S E2
 E OFLOXACIN/DCN
 E E5+ALL/DCN
 L91 1 S E2
 E ENOXACIN/DCN
 E E3+ALL/DCN
 L92 23 S E2
 L93 0 S L64 AND L74-L92
 L94 0 S L72 AND L61,L62
 L95 13 S L71 NOT L72,L73
 L96 8 S L95 AND L61,L62
 L97 5 S L95 NOT L96

FILE 'WPIDS' ENTERED AT 15:49:36 ON 05 JUN 2000
 L98 9 S L73,L96

=> fil wpids

FILE 'WPIDS' ENTERED AT 15:51:29 ON 05 JUN 2000
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 DERWENT WEEK FOR POLYMER INDEXING: 200026
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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L98 ANSWER 1 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1999-040700 [04] WPIDS
 DNC C1999-012586
 TI Improved **bacterial cellulose**, for e.g. industrial material -
 contains ribbon-form microfibril of specified size.
 DC A11 A96 D13 D16 F01
 PA (AJIN) AJINOMOTO KK
 CYC 1
 PI JP 10298204 A 19981110 (199904)* 10p C08B037-00 <--
 ADT JP 10298204 A JP 1997-214065 19970724
 PRAI JP 1997-62282 19970228; JP 1996-215332 19960726
 IC ICM C08B037-00
 ICS C08B015-00
 AB JP 10298204 A UPAB: 19990127
 A **bacterial cellulose** contains ribbon-form microfibril
 of 10-100 nm. in short axis and 160-1000 nm. in long axis.
 Also claimed is a method of making **bacterial cellulose** which comprises culturing **bacterial** capable of producing **cellulose** outside the microbial body in a medium contg. **inhibitor of cell division** and separating the **cellulose** produced.
 USE - The **bacterial cellulose** is useful for e.g. industrial material, cloth material, medical material or food material.
 ADVANTAGE - The **bacterial cellulose** contg. the ribbon-form microfibril has improved physical characteristics, esp. improved modulus of elasticity.
 Dwg. 0/7
 FS CPI
 FA AB
 MC CPI: A03-A05A; A10-A; A12-S05L; D05-C08; D05-H13; F01-C05; F01-E

 L98 ANSWER 2 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1993-392667 [49] WPIDS
 DNC C1993-174718
 TI Microbial **cellulose** pellet used as a column carrier - has specified particle size and is obtd. by culturing microbe producing microbial **cellulose** and soluble saccharide(s) gives uniform liq. flow.
 DC D16 D17 J04
 PA (AJIN) AJINOMOTO KK
 CYC 1
 PI JP 05295001 A 19931109 (199349)* 8p C08B015-00 <--
 ADT JP 05295001 A JP 1992-137487 19920414
 PRAI JP 1992-137487 19920414
 IC ICM C08B015-00
 ICS C12P019-04
 ICI C12P019-04, C12R001:02
 AB JP 05295001 A UPAB: 19940126
 Microbial **cellulose** pellet having a particle size of 0.1-2.0mm is new.
 The prepn. of a microbial **cellulose** pellet which comprises culturing a microbe producing microbial **cellulose** and soluble saccharides under stirring is also claimed.
 USE/ADVANTAGE - The viscosity of the culture can be kept low. The microbial **cellulose** pellet can be used as a column carrier giving a uniform liq. flow.
 In an example, **acetobacter pasteurianus** FERM P-12884 was seed cultured in a seed medium contg. 40.0g/l fructose, 50 ml/l corn steep liquor, 3.0 g/l ammonium sulphate, 1.0g g/l KH₂PO₄, 1.0g/l Mg sulphate heptahydrate, 100 mg/l phytic acid, 15 mg/l ferric ammonium citrate, 15 ml/l Ca chloride, 1 mg/l ammonium molybdate, 2 mg/l ZnSO₄.7H₂O, 1 mg/l MnSO₄.4H₂O, 0.02 mg/l CuSO₄.5H₂O, 0.5 mg/l nicotinic

acid, 0.5 mg/l pyridoxine-HCl, 0.5 mg/l thyamine-HCl, 0.2mg/l Ca pantothenate, 0.2 mg/l riboflavin, 0.02 mg/l folic acid, 0.02 mlg/l biotin, 100 mg/l yeast extract and 100 mg/l malt extract at 30 deg.C. for 3-5 days. The seed culture was further cultured in a main medium of the same compsn. as the seed medium at 30 deg.C. for 120 hrs.. 15 g/l of microbial **cellulose** with particle size of 0.1 to 1mm. was obtd..

Dwg.0/0

FS CPI

FA AB

MC CPI: D05-H; J04-A05

L98 ANSWER 3 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1993-113206 [14] WPIDS

DNC C1993-050475

TI Disaggregation of **bacterial cellulose** for paper making, solid food stabiliser, etc. - by applying high speed shear force to dry **bacterially** produced **cellulose**, giving easy washing, transport and storage.

DC A11 D13 D16 D17 F09

PA (AJIN) **AJINOMOTO KK**; (MITY) MITSUBISHI PAPER MILLS LTD

CYC 1

PI JP 05051885 A 19930302 (199314)* 4p D21B001-30

ADT JP 05051885 A JP 1991-228479 19910815

PRAI JP 1991-228479 19910815

IC ICM D21B001-30

ICS C08B015-08; C08B037-00; D01F002-00

AB JP 05051885 A UPAB: 19931114

Process comprises disaggregating a dry bateria celluose by applying high speed shear force, when disaggregating **bacteria cellulose** produced by **microorganisms**.

USE/ADVANTAGE - Useful for a disaggregation material for paper making, stabiliser for solid food. The method can be utilised for a broad range of raw materials. The disaggregated material has the same binder performance as material obtd. with disaggregating conventional **bacteria cellulose** gel, and washing is easy. The raw material of dry **bacteria cellulose** is easy to transport and preserve

Dwg.0/0

FS CPI

FA AB

MC CPI: A03-A01A; A12-S05L; A12-W06; D03-H01Q; D05-H04; D06-H; F01-A02; F05-A01

L98 ANSWER 4 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1990-205041 [27] WPIDS

DNN N1990-159136 DNC C1990-088724

TI Highly conductive substance - is obtd. by heat-treating **cellulose** produced by microbes, for conductive material, resistor, heater, etc..

DC A11 A85 D16 L03 V01 X12 X25

PA (AJIN) **AJINOMOTO KK**

CYC 1

PI JP 02135609 A 19900524 (199027)*

ADT JP 02135609 A JP 1988-289690 19881116

PRAI JP 1988-289690 19881116

IC C08B015-00; C08J007-00; C08L001-00; C12P019-04; D01F002-00; H01B001-04

AB JP 02135609 A UPAB: 19930928

Highly conductive substance is obtd. by heat-treatment of **cellulose** produced by microbes. Pref. substance is in form of film, or fibre. Heat-treatment is carried out at temp. of at least 500 deg.C and in an inert gas atmos.

USE/ADVANTAGE - Used for conductive material, resistor, heater, light emitting material, electrode, separator, etc. Substance with high conductivity, stability, and mechanical strength can be prep'd. Other substance can be intercalated into substance.

In an example, 50 ml of culture medium comprising sucrose, yeast

extract, (NH4)2SO4, KH2PO4 and MgSO4 . 7H2O was placed in flask and sterilised with steam at 120 deg.C for 20 mins. to prepare culture soln. Platinum loop of **acetobacter aceti**-subspecies **xylinum** ATCC 10821, which had been cultivated at 30 deg.C for 3 days on test tube slant agar comprising yeast extract, peptone, and mannitol, was inoculated on culture soln., then cultivated at 30 deg.C for 3 days. Gel film contg. white **cellulose** was formed on culture soln. Film was soaked twice in 0.5N NaOH soln. at 100 deg.C for 1 hr., neutralised, and washed for 24 hrs. Obtd. film was heat-treated at 3000 deg.C in pure Ar flow to obtain graphite film.

0/0

FS CPI EPI

FA AB

MC CPI: A03-A05; A09-A03; A10-E05B; D06-H; L03-A02
EPI: V01-A02; X12-D01C; X25-B01B

L98 ANSWER 5 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1988-273969 [39] WPIDS
 DNC C1988-121913
 TI Modified microorganism-produced **cellulose** for speaker core material - comprises ribbon-like micro-fibril contg. nitrogen and alpha **cellulose**.
 DC D16 D17 F09 L03
 PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**; (SONY) SONY CORP
 CYC 1
 PI JP 63199201 A 19880817 (198839)* 8p
 JP 2578333 B2 19970205 (199710) 6p C08B015-00 <--
 ADT JP 63199201 A JP 1987-30469 19870212; JP 2578333 B2 JP 1987-30469 19870212
 FDT JP 2578333 B2 Previous Publ. JP 63199201
 PRAI JP 1987-30469 19870212
 IC C08B015-00; C12P019-04; D21H005-12
 ICM C08B015-00
 ICS C12P019-04; D21H005-12
 AB JP 63199201 A UPAB: 19930923
 Substances comprises ribbon like microfibril with N content below 1.5 wt.% and alpha-**cellulose** content above 95 wt.%.

As the microorganism, **Acetobacter aceti** subsp. (A) **xylinum** ATCC 10821, **A. pasteurian**, **A. rancens**, **Sarcina ventriculi**, **Bacterium xyloides**, etc. are pref. Microorganisms are cultured in a nutrient culture medium contg. C source, N source, inorganic salts, amino acids, vitamins, etc. at 20-40 deg.C and pH 2.5-9 for 1-30 days.

USE/ADVANTAGE - The modified microorganism-produced **cellulose** is excellent material for speaker cone, because it has improved sound transmitting speed and strength due to improved modulus of elasticity, etc.

0/0

FS CPI

FA AB

MC CPI: D05-C08; D05-H04; D06-H; F05-A06; F05-A07; L03-H03

L98 ANSWER 6 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1987-300789 [43] WPIDS
 DNN N1987-224697 DNC C1987-127975
 TI Gel in modified microbially produced **cellulose** - useful for mass culture of prodn. of polypeptide(s) etc., and as medical vulnerary cover.
 DC A96 B04 D16 D22 P34
 IN ETO, Y; SHIBAI, H; TAKANO, S; WATANABE, K; **YAMANAKA, S**
 PA (AJIN) **AJINOMOTO KK**; (AJIN) **AJINOMOTO CO INC**
 CYC 5
 PI EP 243151 A 19871028 (198743)* EN 15p
 R: DE FR GB
 JP 63152601 A 19880625 (198831)
 EP 243151 B1 19921216 (199251) EN 20p C12N001-22
 R: DE FR GB

DE 3783073 G 19930128 (199305) C12N001-22
 US 5558861 A 19960924 (199644) 8p A01N063-00
 JP 2606213 B2 19970430 (199722) 11p C08B015-06 <--
 ADT EP 243151 A EP 1987-303507 19870422; JP 63152601 A JP 1987-96141 19870421;
 EP 243151 B1 EP 1987-303507 19870422; DE 3783073 G DE 1987-3783073
 19870422, EP 1987-303507 19870422; US 5558861 A Cont of US 1987-39739
 19870420, Cont of US 1991-653473 19910211, Cont of US 1993-44083 19930406,
 Cont of US 1993-159708 19931201, Cont of US 1994-281135 19940727, Cont of
 US 1995-407250 19950320, US 1995-567212 19951205; JP 2606213 B2 JP
 1987-96141 19870421
 FDT DE 3783073 G Based on EP 243151; JP 2606213 B2 Previous Publ. JP 63152601
 PRAI JP 1986-92479 19860422; JP 1986-169554 19860718
 REP 1.Jnl.Ref; A3...8835; JP 61025481; No.SR.Pub; WO 8602095
 IC ICM A01N063-00; C08B015-06; C12N001-22
 ICS A61F002-10; A61F013-00; A61K009-14; A61K035-36; A61L015-00;
 A61L015-01; A61L015-16; C08B001-00; C12N001-02; C12N005-06
 AB EP 243151 A UPAB: 19930922
 Gel of microbially produced **cellulose** is new when the
cellulose is modified by (a) physical or chemical bonding to an
 animal cell adhesive protein; and/or (b) substitn. of the H atoms of at
 least some of the OH gps. by a positively or negatively charged organic
 gp. Complex of a gel as defined above with an animal cell bonded to or
 adsorbed in the gel is also claimed.
 USE/ADVANTAGE - The complex with animal cells is useful for the mass
 culture of the cells, esp. in the prodn. of interferon,
 interleukin-1, plasminogen active oncolytic factor, monoclonal antibodies
 and other polypeptides. The cells can be cultured to a high density and at
 a high propagation speed. The gel may be used for wound and burn to give
 protection and to assist regrowth of the skin, with superior results as a
 vulnerary cover. It has high adhesion to wounds. It may carry an enzyme,
bacteriostat, antibacterial agent, chemotherapeutic
 agent, coagulant or anticoagulant.
 0/0
 FS CPI GMPI
 FA AB
 MC CPI: A03-A05; A10-E01; A12-S; A12-V03A; A12-W11L; B02-V03; B04-B02C;
 B04-B04A3; B04-B04A6; B04-B04C5; B04-B04D3; B04-C01G; B04-C02A;
 B12-A01; B12-A07; B12-M03; D05-C11; D05-C12; D05-H07; D05-H10
 ABEQ EP 243151 B UPAB: 19930922
 A gel of microbially-produced **cellulose**, characterised in that
 the microbially-produced **cellulose** is modified by (1) physically
 or chemically bonding an animal cell adhesive protein to the
cellulose; (2) substituting hydrogen atoms of at least some
 hydroxyl groups of the **cellulose** with a positively or negatively
 charged organic group; or (3) substituting hydrogen atoms of at least some
 hydroxyl groups of the **cellulose** with a positively or negatively
 charged organic group and further physically or chemically bonding an
 animal cell adhesive protein to the **cellulose**.
 0/0
 ABEQ US 5558861 A UPAB: 19961104
 A skin graft or vulnerary cover for external wound surfaces, which
 comprises a complex of a water-containing gel of modified
 microbially-produced **cellulose** with human cells bonded to or
 adsorbed in said gel, said human cells consisting of human epidermal
 cells, said human epidermal cells being cultured substantially in a
 monolayer state on the water-containing gel form of the modified
 microbially-produced **cellulose**, wherein:
 1) an animal cell adhesive protein is physically or chemically bonded
 to the modified microbially-produced **cellulose**, or
 2) said **cellulose** contains hydroxyl groups, wherein at
 least a portion of the hydrogen atoms of the hydroxyl groups are
 substituted with a positively or negatively charged group, or
 3) an animal cell adhesive protein is physically or chemically bonded
 to the modified microbially-produced **cellulose**, and the
cellulose contains hydroxyl groups, wherein at least a portion of
 the hydrogen atoms of the hydroxyl groups are substituted with a

positively or negatively charged group,

wherein the positively charged group has the formula
 $(CH_2)_n-N+(R_1)(R_2)(R_3)$ (I) or $(CH_2)_n-N(R_1)(R_2)$ (II).

$n = 0-8$; and

$R_1-R_3 = H$ or an alkyl, aryl, arylalkyl, alkylaryl, cycloalkyl or alkoxyalkyl;

provided that R_1-R_3 are not all H ; and

where the negatively charged group is carboxy methyl, carboxy ethyl, phosphoric acid group or a sulphuric acid group.

Dwg.0/0

L98 ANSWER 7 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1986-300751 [46] WPIDS
 DNC C1986-130220
 TI Fine **cellulosic** crystal prepn. - by suspending
cellulosic substance obtd. from **microorganism** in medium
 of e.g. alkali and metal oxide ammonium liq. and grinding.
 DC B07 D13 D21 G02 G03 J04
 PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**
 CYC 1
 PI JP 61221201 A 19861001 (198646)* 5p
 JP 05080484 B 19931109 (199347) C08B015-08 <--
 ADT JP 61221201 A JP 1985-62653 19850327; JP 05080484 B JP 1985-62653 19850327
 FDT JP 05080484 B Based on JP 61221201
 PRAI JP 1985-62653 19850327
 IC C08B015-08
 ICM C08B015-08
 AB JP 61221201 A UPAB: 19930922
Cellulosic fine crystal prepn. comprises suspending
microorganism produced **cellulosic** substance in a medium
 consisting of one or more of above 1N acid, above 1N alkali, polar solvent
 and metal oxide ammonium liq. and mechanically grinding the suspended
cellulosic substance before or after drying to obtain
cellulosic fine crystal with particle size 0.01-0.1 micron.
 The acid is e.g., hydrochloric acid, sulphuric acid, nitric acid,
 formic acid, acetic acid and their combustion. Alkali is e.g., caustic
 soda, caustic potassium and their combination. Polar solvent is e.g.,
 dimethyl sulphoxide, formaldehyde, etc. and their combination. Metal oxide
 ammonium liq. is e.g., copper oxide ammonium liq. **Cellulosic**
 substance can be added up to 5% by dry wt. to the medium. Suspending
 operation is carried out usually at room temp. to 100 deg.C for 1 -
 several hrs. Mechanical grinding is carried out using a macerator for
cellulose before drying and a ball-mill after drying.
 USE/ADVANTAGE - The **cellulosic** fine crystal is used for
 foods additive, pharmaceuticals, cosmetics and paint, adhesive binder and
 high-strength composite material and chromatography carrier.
 0/0
 FS CPI
 FA AB
 MC CPI: B04-C02A; B04-C02F; B12-M11H; C01-C02; C04-C02A; C12-M11B; D03-H;
 D08-B; G02-A02A; G03-B02A; J01-D01A; J04-B01C
 ABEQ JP 93080484 B UPAB: 19940111
Cellulosic fine crystal prepn. comprises suspending
microorganism produced **cellulosic** substance in a medium
 consisting of one or more of above 1N acid, above 1N alkali, polar solvent
 and metal oxide ammonium liq. and mechanically grinding the suspended
cellulosic substance before or after drying to obtain
cellulosic fine crystal with particle size 0.01-0.1 micron.
 The acid is e.g., hydrochloric acid, sulphuric acid, nitric acid,
 formic acid, acetic acid and their combustion. Alkali is e.g., caustic
 soda, caustic potassium and their combination. Polar solvent is e.g.,
 dimethyl sulphoxide, formaldehyde, etc. and their combination. Metal oxide
 ammonium liq. is e.g., copper oxide ammonium liq. **Cellulosic**
 substance can be added up to 5% by dry wt. to the medium. Suspending
 operation is carried out usually at room temp. to 100 deg.C for 1 -
 several hrs. Mechanical grinding is carried out using a macerator for

cellulose before drying and a ball-mill after drying.

USE/ADVANTAGE - The **cellulosic** fine crystal is used for foods additive, pharmaceuticals, cosmetics and paint, adhesive binder and high-strength composite material and chromatography carrier.
(J61221201-A)

L98 ANSWER 8 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1986-294559 [45] WPIDS
DNC C1986-127616
TI Very small **cellulosic** fine crystal - used as cosmetic or paint assistant food extender adhesive etc..
DC A11 A60 B07 D13 D21 G02
PA (AGEN) AGENCY OF IND SCI TECH; (AJIN) AJINOMOTO KK; (AGEN) AGENCY OF IND SCI & TECHNOLOGY
CYC 1
PI JP 61215635 A 19860925 (198645)* 4p
JP 05027653 B 19930421 (199319) 3p C08L001-02
ADT JP 61215635 A JP 1985-58803 19850322; JP 05027653 B JP 1985-58803 19850322
FDT JP 05027653 B Based on JP 61215635
PRAI JP 1985-58803 19850322
IC A61K007-00; A61K047-00; C08B015-08; C08L001-02; C09J003-04;
C12P019-04
ICM C08L001-02
ICS C08B015-08; C08J003-12; C09J003-04; C12P019-04
ICA A61K007-00; A61K047-38; C09D007-12; C09D201-00; C09J101-02
AB JP 61215635 A UPAB: 19930922
Cellulosic fine crystal with particle size 0.01 micrometer - 0.1 micrometer.

USE/ADVANTAGE - The **cellulosic** fine crystal is very hydrophilic and give excellent suspension in soln. It has constant form and large surface area per unit wt. It gives smooth feeling to skin when used as assistant to pharmaceuticals, cosmetics, etc. Paints contg. it as assistant can be coated uniformly to form a thin coating. It is used as adhesive for hydrophilic substance. It can be used as extender for ice cream to give smooth taste. It is impregnated into hydrophobic polymer (e.g. unsatd. polyester resin, epoxy resin, etc.), hydrophilic polymer (e.g. polyvinyl alcohol, etc.) and/or inorganic material (e.g. alumina, titanium oxide, etc.) to strengthen them. Its acetic acid deriv. can be used as deodorant. It is used as it is or deriv. for chromatography carrier to improve sepn.

In an example 2N or 3N caustic soda soln. of 0.5-5 wt.% as dry **cellulosic** substance produced by **microorganisms** is settled at 5-100 deg.C for 1 min - several hrs. with or without stirring. Alkali is removed with acid or water washing. Then, it is bleached with sodium hypochlorite. Finally it is crushed mechanically before or after drying using a pulp-macerator or ball-mill respectively.

O/O

FS CPI
FA AB
MC CPI: A03-A05; A12-S; B04-C02A1; B12-M11H; D03-E08; D08-B09; G02-A02A;
G02-A05; G03-B02A
ABEQ JP 93027653 B UPAB: 19931113

Cellulosic fine crystal with particle size 0.01 micrometre - 0.1 micrometre.

USE/ADVANTAGE - The **cellulosic** fine crystal is very hydrophilic and give good suspension in soln.. It has constant form and large surface area per unit wt.. It gives smooth feeling to skin when used as assistant to pharmaceuticals, cosmetics, etc.. Paints contg. it as assistant can be coated uniformly to form a thin coating. It is used as adhesive for hydrophilic substance. It can be used as extender for ice cream to give smooth taste. It is impregnated into hydrophobic polymer (e.g. unsatd. polyester resin, epoxy resin, etc.), hydrophilic polymer (e.g. PVA, etc.) and/or inorganic material (e.g. alumina, titanium oxide, etc.) to strengthen them. Its acetic acid deriv. can be used as deodorant. It is used as it is or deriv. for chromatography carrier to improve sepn..

In an example, 2N or 3N caustic soda soln. of 0.5-5 wt.% as dry

cellulosic substance produced by **microorganisms** is settled at 5-100 deg.C for 1 minute to several hrs. opt. with stirring. Alkali is removed with acid or water washing. Then, it is bleached with sodium hypochlorite. Finally, it is crushed mechanically before or after drying using a pulp-macerator or ball-mill respectively. (J61215635-A)

L98 ANSWER 9 OF 9 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1986-179891 [28] WPIDS
 DNC C1986-077457
 TI **Cellulosic** dissociated prodn. prodn. - by applying mechanical shearing force to **cellulosic** gel produced by **microorganisms**.
 DC D16 G02
 PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (AJIN) **AJINOMOTO KK**
 CYC 1
 PI JP 61113601 A 19860531 (198628)* 3p
 JP 04064521 B 19921015 (199246) 3p C08B015-00 <--
 ADT JP 61113601 A JP 1984-234437 19841107; JP 04064521 B JP 1984-234437
 19841107
 FDT JP 04064521 B Based on JP 61113601
 PRAI JP 1984-234437 19841107
 IC ICM **C08B015-00**
 ICS A23L001-03
 ICA C12P019-04; D21B001-30
 ICI C12P019-04, C12R001:02
 AB JP 61113601 A UPAB: 19930922
 Fine ribbon-like **cellulosic** dissociated prod. has excellent dispersibility in aq. system. It consists of microfibril in which elemental fibrils are arranged in parallel in a plane.
 Prodn. of the dissociated **cellulosic** prod. comprises applying mechanical shearing force to gel-like **cellulosic** substance produced by **microorganisms** as such or in the form of a mixt. with water, aq. soln. or hydrophilic solvent. As the **microorganism**, *Acetobacter acetic* subsp. *xylinum* is cited. Shearing force can be applied easily by using a dissociator, mixer, etc.
 USE/ADVANTAGE - The prod. has excellent water dispersibility and water retention compared with the conventional **cellulosic** substance. It is used to maintain the viscosity of foods, cosmetics, paints, etc. and improve the stability of foods and as low calorie additive or emulsion stabilising additive, etc.
 O/O
 FS CPI
 FA AB
 MC CPI: D05-C08; D06-H; G02-A03

=> fil hcplus

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=> d all hitstr tot 156

L56 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2000 ACS
 AN 2000:108908 HCAPLUS
 DN 132:193270
 TI **Bacterial cellulose** - a masterpiece of Nature's arts
 AU Iguchi, M.; Yamanaka, S.; Budhiono, A.
 CS Bogor Research Station for Rubber Technology, Bogor, 16151, Indonesia
 SO J. Mater. Sci. (2000), 35(2), 261-270
 CODEN: JMTSAS; ISSN: 0022-2461
 PB Kluwer Academic Publishers
 DT Journal; General Review
 LA English
 CC 16-0 (Fermentation and Bioindustrial Chemistry)
 Section cross-reference(s): 6, 10, 17
 AB A review with 41 refs. Ever since its remarkable mech. properties were found fifteen years ago, interest has grown in **bacterial cellulose** for which the use had been more or less limited to the manuf. of nata-de-coco, an indigenous food of Southeast Asia. This paper reviews the progress of relevant studies, including the prodn. of **cellulose by bacteria**, the formation of **microfibrils** and gel layer, the properties of gel and processed sheets, and some aspects of applications.
 ST review **bacteria cellulose** manuf
 IT **Bacteria (Eubacteria)**
 Fermentation
 (bacterial cellulose: prodn., properties and applications)
 IT 9004-34-6P, **Cellulose**, biological studies
 RL: BMF (Bioindustrial manufacture); BOC (Biological occurrence); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
 (bacterial cellulose: prodn., properties and applications)
 RE.CNT 41
 RE
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 IT 9004-34-6P, **Cellulose**, biological studies
 RL: BMF (Bioindustrial manufacture); BOC (Biological occurrence); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
 (bacterial cellulose: prodn., properties and applications)
 RN 9004-34-6 HCPLUS
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 2 OF 8 HCPLUS COPYRIGHT 2000 ACS
 AN 1999:163087 HCPLUS
 DN 130:335073
 TI Crystalline features of **bacterial cellulose** altered by chemical agents during biosynthesis
 AU Abe, Kazunori; Sugiyama, Junji; Itoh, Takao; Ishihara, Masaru; Yamanaka, Shigeru
 CS Laboratory of Cell Structure and Function, Japan
 SO Wood Res. (1998), 85, 66-67
 CODEN: WDRSAU; ISSN: 0372-719X
 PB Kyoto University, Wood Research Institute
 DT Journal
 LA English
 CC 10-1 (Microbial, Algal, and Fungal Biochemistry)
 AB Changes in the morphol. of **cellulose microfibrils** induced in **Acetobacter aceti** by chem. agents known the elongate or shorten the **bacterial** cell were investigated by electron microscopy after mild homogenization of the **bacterial** mat. The width of the ribbon-shaped **microfibril** increased as the cell length increased. The relative crystallinity, uniplanar orientation, and the fractional ratio if I.α from FT-IR spectroscopy tented to increase in relation to the increase of cell length, suggesting that chem. treatment affected the aggregation of subfibrils to a higher-order structure.
 ST **bacteria cellulose microfibril** morphol chem modification; cryst cellulose microfibril chem modification **bacteria**
 IT **Acetobacter aceti**
 Crystallinity
 Microfibril
 (cryst. features of **bacterial cellulose** altered by

5-18
Jug

chem. agents during biosynthesis)
IT 9004-34-6, Cellulose, properties
RL: PRP (Properties)
(microfibrils; cryst. features of bacterial cellulose altered by chem. agents during biosynthesis)

RE.CNT 2

RE

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- (2) Sugiyama, J; Macromolecules 1991, V24, P4168 HCPLUS

IT 9004-34-6, Cellulose, properties
RL: PRP (Properties)

(microfibrils; cryst. features of bacterial cellulose altered by chem. agents during biosynthesis)

RN 9004-34-6 HCPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 3 OF 8 HCPLUS COPYRIGHT 2000 ACS

AN 1998:735148 HCPLUS

DN 130:39984

TI Bacterial cellulose with ribbon-like microfibril shape

IN Ishihara, Masaru; Yamanaka, Shigeru

PA Ajinomoto Co., Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08B037-00

ICS C08B015-00

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 16

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 10298204 | A2 | 19981110 | JP 1997-214065 | 19970724 |
| | US 6060289 | A | 20000509 | US 1997-900124 | 19970725 |

PRAI JP 1996-215332 19960726

JP 1997-62282 19970228

AB The cellulose having short axis 10-100 nm and long axis 160-1000 nm is produced extracellularly by cellulose-generating bacteria, e.g., Acetobacter pasteurianus, in a culture contg. cell division inhibitor, e.g., nalidixic acid, or org. reducing agent.

ST Acetobacter cellulose ribbon like microfibril ; bacterial cellulose culture cell division inhibitor; morphol ribbon like microfibril bacterial cellulose; extracellular ribbon like microfibril bacterial cellulose

IT Acetobacter pasteurianus

(bacterial cellulose with ribbon-like microfibril shape)

IT Fermentation

Reducing agents

(in culture for manuf. of bacterial cellulose with ribbon-like microfibril shape)

IT Cell division

(inhibitor for; in culture for manuf. of bacterial cellulose with ribbon-like microfibril shape)

IT 9004-34-6P, Cellulose, properties

RL: BMF (Bioindustrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation)

(bacterial cellulose with ribbon-like microfibril shape)

IT 56-75-7, Chloramphenicol 389-08-2,
Nalidixic acid 3483-12-3, Dithiothreitol
 RL: MOA (Modifier or additive use); USES (Uses)
 (in culture for manuf. of **bacterial cellulose** with
 ribbon-like microfibril shape)

IT 9004-34-6P, **Cellulose**, properties
 RL: BMF (Bioindustrial manufacture); PRP (Properties); BIOL (Biological
 study); PREP (Preparation)
 (**bacterial cellulose** with ribbon-like
 microfibril shape)

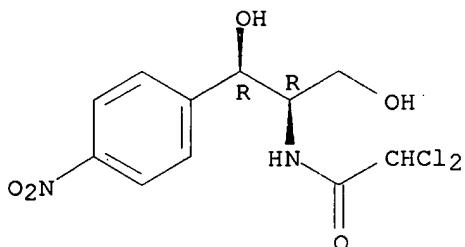
RN 9004-34-6 HCAPLUS
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

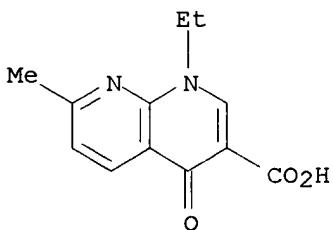
IT 56-75-7, Chloramphenicol 389-08-2,
Nalidixic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (in culture for manuf. of **bacterial cellulose** with
 ribbon-like microfibril shape)

RN 56-75-7 HCAPLUS
 CN Acetamide, 2,2-dichloro-N-[(1R,2R)-2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 389-08-2 HCAPLUS
 CN 1,8-Naphthyridine-3-carboxylic acid, 1-ethyl-1,4-dihydro-7-methyl-4-oxo-
 (8CI, 9CI) (CA INDEX NAME)



L56 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2000 ACS
 AN 1993:253549 HCAPLUS
 DN 118:253549
 TI **Bacterial cellulose. III. Development of a new form of cellulose**
 AU Okiyama, Atsushi; Motoki, Masao; Yamanaka, Shigeru
 CS Food Res. Dev. Lab., Ajinomoto Co., Inc., Kawasaki, 210, Japan
 SO Food Hydrocolloids (1993), 6(6), 493-501
 CODEN: FOHYES; ISSN: 0268-005X
 DT Journal
 LA English
 CC 17-2 (Food and Feed Chemistry)
 AB A new form of **cellulose, bacterial cellulose** (BC), was developed by disintegrating gelatinous **cellulose** which

was produced by **Acetobacter aceti** AJ12368. BC is wet (97% water) and paste-like, and comprised of flocks of microfibrils. It swells in water and disperses homogeneously at a level of >toreq.0.3%. The suspension is a thixotropic fluid, and also shows dilatant flow at a low shear rate. The viscosity of a BC suspension is low compared to common thickeners. As a filler, BC has the highest water-holding capacity among com. cellulose products. BC is considered as a stabilizer with low viscosity and a low-calorie material as a fat substitute.

ST **Acetobacter cellulose** manuf thickening agent; fat substitute **bacterial cellulose**; **bacterial cellulose** manuf thickener fat substitute
 IT Thickening agents
 Fat substitutes
 (bacterial cellulose manuf. as)
 IT **Acetobacter aceti**
 (cellulose from, manuf. and properties of, as food additive)
 IT Food functional properties
 (of bacterial cellulose)
 IT Food functional properties
 (swelling, of bacterial cellulose)
 IT Food functional properties
 (viscosity, of bacterial cellulose)
 IT Food functional properties
 (water binding, of bacterial cellulose)
 IT 9004-34-6P, **Cellulose**, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. and properties of, of **Acetobacter aceti**)
 IT 9004-34-6P, **Cellulose**, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. and properties of, of **Acetobacter aceti**)
 RN 9004-34-6 HCAPLUS
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2000 ACS
 AN 1992:108558 HCAPLUS
 DN 116:108558
 TI Preparation of high-strength materials from **bacterial cellulose**
 AU Iguchi, Masatoshi; Yamanaka, Shigeru; Watanabe, Kunihiko; Nishi, Yoshio; Uryu, Masaru
 CS Res. Inst. Polym. Text., Tsukuba, 305, Japan
 SO Integr. Fundam. Polym. Sci. Technol.--5, [Proc. Int. Meet. Polym. Sci. Technol., Rolduc Polym. Meet.--5], 5th (1991), Meeting Date 1990, 371-9.
 Editor(s): Lemstra, P. J.; Kleintjens, L. A. Publisher: 44-50, London, UK.
 CODEN: 57HAAD
 DT Conference
 LA English
 CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)
 AB A pellicle of **bacterial cellulose** gave a strong sheet, the Young's modulus being as high as 30 GPa across the plane. Such good mech. properties originated in the unique fibrillar morphol. in which microfibrils are lightly bound by interfibrillar H bonds. The sheets had good acoustic characteristics when applied to manufg. diaphragms of practical models. The raw material was also processed into a pulp which was useful for making strong papers and reinforcing ordinary pulp papers and mats of other fibrous materials.
 ST **bacteria cellulose** pulp paper strength
 IT Bacteria
 (cellulose pulp from, for high-strength sheets)
 IT Pulp, **cellulose**
 (from bacteria, for high-strength sheets)
 IT Sheet materials
 (high-strength, from **bacterial cellulose** pulp)

IT Paper
 (high-strength, from **cellulose** pulp from **bacteria**)
 IT Mechanical property
 (of sheets from **bacterial cellulose** pulp)
 IT 9004-34-6
 RL: USES (Uses)
 (pulp, from **bacteria**, for high-strength sheets)
 IT 9004-34-6
 RL: USES (Uses)
 (pulp, from **bacteria**, for high-strength sheets)
 RN 9004-34-6 HCAPLUS
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2000 ACS
 AN 1988:633003 HCAPLUS
 DN 109:233003
 TI Modulus-enhanced **bacteria** generated **cellulose** and
 manufacture
 IN Iguchi, Masatoshi; Mihashi, Shigenobu; Yamanaka, Shigeru;
 Watanabe, Kunihiko; Kitamura, Nobuyoshi; Nishi, Mio; Uriyu, Masaru
 PA Agency of Industrial Sciences and Technology, Japan; Ajinomoto
 Co., Inc.; Sony Corp.
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08B015-00
 ICS C12P019-04; D21H005-12
 CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)

| FAN.CNT 1 | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------|---|------|----------|-----------------|----------|
| PI | JP 63199201 | A2 | 19880817 | JP 1987-30469 | 19870212 |
| | JP 2578333 | B2 | 19970205 | | |
| AB | Elastic title cellulose with high strength and sound-transmission speed, useful in speaker cones, etc., was manufd. having total N content .ltoreq.1.5%, and .alpha.- cellulose content .ltoreq.95%, and consisted of ribbon-like microfibrils . Pressing bacteria (<i>Acetobacter aceti</i> subsp xylinum, ATCC 1084 strain) generated cellulose between metal plates at 130.degree. prep'd. a film which was impregnated with 4% aq. NaOH at 20.degree. for 3 h, washed, repressed, and dried to give a modified cellulose (Kjeldahl N content 0.31%, .alpha.- cellulose content 98.4%) film showing modulus 21.5 GPa and sound transmission speed 3860 m-s-1, vs. 15.0, and 3410, resp., without the NaOH treatment. | | | | |
| ST | bacteria cellulose elasticity improved; alkali impregnation bacteria cellulose ; sound transmission bacteria cellulose | | | | |
| IT | Bleaching agents (purifn. with, of bacteria generated cellulose , for improved toughness) | | | | |
| IT | Alkali metal hydroxides RL: USES (Uses) (purifn. with, of bacteria generated cellulose , for improved toughness) | | | | |
| IT | 9004-34-6, Cellulose , uses and miscellaneous RL: USES (Uses) (modification of bacteria generated, for improved toughness) | | | | |
| IT | 1310-73-2P, Sodium hydroxide, preparation 7681-52-9P RL: PREP (Preparation) (purifn. with, of bacteria generated cellulose , for improved toughness) | | | | |
| IT | 9004-34-6, Cellulose , uses and miscellaneous RL: USES (Uses) | | | | |

(modification of **bacteria** generated, for improved toughness)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2000 ACS
AN 1987:51997 HCAPLUS
DN 106:51997
TI Molded material comprising **bacteria**-produced **cellulose**
IN Iguchi, Masatoshi; Mitsuhashi, Shigenobu; Ichimura, Kunihiro; Nishi,
Yoshio; Uryu, Masaru; Yamanaka, Shigeru; Watanabe, Kunihiko
PA Agency of Industrial Sciences and Technology, Japan; Sony Corp. ;
Ajinomoto Co., Inc.
SO Eur. Pat. Appl., 36 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C08L001-02
ICS G10K013-00; D21H001-00
CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | EP 200409 | A2 | 19861105 | EP 1986-302755 | 19860414 |
| | EP 200409 | A3 | 19880309 | | |
| | EP 200409 | B1 | 19940629 | | |
| | R: DE, FR, GB | | | | |
| | JP 62036467 | A2 | 19870217 | JP 1986-85021 | 19860415 |
| | JP 08032798 | B4 | 19960329 | | |
| | US 4742164 | A | 19880503 | US 1986-852838 | 19860416 |
| | JP 08035155 | A2 | 19960206 | JP 1995-98542 | 19950424 |
| | JP 08049188 | A2 | 19960220 | JP 1995-98541 | 19950424 |

PRAI JP 1985-79291 19850416
JP 1985-122818 19850607
JP 1986-85021 19860415

AB **Bacteria**-produced **cellulose** (I) comprising ribbon-like **microfibrils**, is useful as a component of molded materials having high dynamic strength, modulus of elasticity, and expansion strength. A sterilized medium comprising sucrose, yeast ext. (Difco), KH₂PO₄, and MgSO₄.7H₂O was inoculated with **Acetobacter aceti** xylinum ATCC10821 and grown at 30.degree. for 30 days in agar medium to give a gel-like membrane contg. white **bacteria**-produced I. The gel-like membrane was washed, pressed, and dried to give a sheet (10-m thick) having modulus of elasticity 15.8 GPa, compared with 1.5 GPa for cellophane.

ST **bacteria** produced **cellulose** molded material;
Acetobacter produced **cellulose** **microfibril**;
elasticity modulus **bacteria** produced **cellulose**

IT Membranes
(acoustic, **bacteria**-produced **cellulose** in)

IT **Acetobacter pasteurianus**
(**cellulose** produced by, with increased elastic modulus and stretch resistance)

IT Paper
(contg. **bacteria**-produced **cellulose** **microfibrils**, for diaphragms)

IT Papier-mache
(manuf. of, **bacteria**-produced **cellulose** in, stretch-resistant)

IT Acoustic devices
(speakers, cone paper for, **bacteria**-produced **cellulose**-contg., with improved fidelity)

IT 9004-34-6, **Cellulose**, uses and miscellaneous
(**bacteria**-produced, **microfibrils**, for molded

materials, elastic and stretch-resistant)
IT 409-21-2, Silicon carbide, uses and miscellaneous 12033-89-5, Silicon
nitride, uses and miscellaneous
(paper contg. **bacteria**-produced **cellulose** and, with
improved elasticity)
IT 7440-50-8, Copper, uses and miscellaneous
(powd., paper contg. **bacteria**-produced **cellulose**
and, with increased strength and elasticity)
IT 9004-34-6, **Cellulose**, uses and miscellaneous
(**bacteria**-produced, **microfibrils**, for molded
materials, elastic and stretch-resistant)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L56 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2000 ACS
AN 1986:554948 HCAPLUS
DN 105:154948
TI Manufacture of fibrillated **microorganism**-forming materials
IN Iguchi, Masatoshi; Mihashi, Shigenobu; Yamanaka, Shigeru;
Watanabe, Kunihiko
PA Ajinomoto Co., Inc., Japan; Agency of Industrial Sciences and
Technology
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08B015-00
ICS A23L001-03; A23L001-308
ICA C12P019-04; D21B001-34
CC 43-3 (**Cellulose**, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 17, 62

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 61113601 | A2 | 19860531 | JP 1984-234437 | 19841107 |
| | JP 04064521 | B4 | 19921015 | | |

AB **Cellulosic microfibrils** for food and cosmetics are
prep'd. by mech. shearing aq. suspensions contg. a **microorganism**
forming **cellulosic** material to give **microfibrils** with
increased water retention and water dispersibility. Thus, an aq.
suspension contg. an **Acetobacter acetic** subsp
xylinum-forming **cellulosic** material was centrifuged in a tube
for 15 min and dried to give **microfibrils**. The water retention
of this **microfibril** was 2100%, compared with 40% for a
microfibrils obtained from **cellulose** pulp.
ST **cellulosic microfibril** water retention;
microorganism forming **cellulose** fibrillation
IT 9004-34-6, uses and miscellaneous
RL: USES (Uses)
(microorganism-forming, fibrillation of, with increased water
retention)
IT 9004-34-6, uses and miscellaneous
RL: USES (Uses)
(microorganism-forming, fibrillation of, with increased water
retention)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> fil biosis

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=> d his l102-

(FILE 'WTEXTILES' ENTERED AT 15:53:52 ON 05 JUN 2000)

FILE 'BIOSIS' ENTERED AT 15:55:45 ON 05 JUN 2000

L102 20607 S L5 OR L10
L103 53840 S ?CELLULOS?
L104 54899 S L102,L103
L105 112088 S L15-L23
L106 5 S L30,L31
L107 2140735 S BACTERIA+ALL/BC
L108 2140735 S MICROORGANISMS+ALL/BC
L109 109684 S L105 AND L106-L108
L110 3418 S L109 AND L36-L49,L50,L51
L111 3 S L110 AND L5
L112 7 S L110 AND CELLULOS?
L113 7 S L111,L112
L114 3 S L113 AND (ELECTROPOR? OR STREPTOMYC? OR BANDAGE)

FILE 'BIOSIS' ENTERED AT 16:05:45 ON 05 JUN 2000

=> d all tot l114

L114 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1993:73805 BIOSIS
DN PREV199395038305
TI Transformation of **Acetobacter xylinum** with plasmid DNA
by **electroporation**.
AU Hall, Pamela E.; Anderson, Steven M.; Johnston, David M.; Cannon, Robert
E. (1)
CS (1) Dep. Biology, Univ. N.C., Greensboro, N.C. 27412 USA
SO Plasmid, (1992) Vol. 28, No. 3, pp. 194-200.
ISSN: 0147-619X.
DT Article
LA English
AB Genetic analysis of **Acetobacter xylinum**, a
cellulose-synthesizing bacterium, has been limited by lack of a
successful transformation method. Transformation of **A.**
xylinum was attempted using two broad-host-range plasmids (pUCD2
and pRK248) and a variety of transformation methods. Methods using CaCl₂,
freeze/thaw treatments, and polyethylene glycol were unsuccessful.
Transformation of a cellulose-negative strain of **A.**
xylinum with plasmids DNA has been achieved with high-voltage
electroporation. Electroporation conditions of 25 μF
capacitance, 2.5 kV, 400 ohms resistance, and pulse lengths of 6-8 ms were
applied to a cell/DNA mixture in a 0.2-cm cuvette. Plasmid pUCD2
transformed at an efficiency of 10⁻⁶-10⁻⁷ transformants/mu-g DNA and .
pRK248 yielded 10⁻⁵ transformants/mu-g DNA. The frequency of
transformation increased linearly with increasing DNA concentration, while
transformation efficiency remained constant. pUCD2 was recovered from
transformants following chloramphenicol amplification and
observed by agarose gel electrophoresis. Both plasmids could be reisolated
from Escherichia coli after back-transformations with alkaline lysis DNA

preparations from *Acetobacter* transformants. Electro-transformation of *A. xylinum* with plasmid DNA suggests its potential use for analysis of the *A. xylinum* genome.

CC Biochemical Methods - Nucleic Acids, Purines and Pyrimidines *10052
 Biochemical Methods - Carbohydrates *10058
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062
 Biochemical Studies - Carbohydrates 10068
 Biophysics - General Biophysical Techniques *10504
 Metabolism - Carbohydrates 13004
 Physiology and Biochemistry of Bacteria 31000
 Genetics of Bacteria and Viruses *31500
 Microbiological Apparatus, Methods and Media *32000
 Food and Industrial Microbiology - Biosynthesis, Bioassay and Fermentation *39007

BC **Acetobacteraceae** 06501
Enterobacteriaceae *06702

IT Major Concepts Bioprocess Engineering; Genetics; Methods and Techniques

IT Chemicals & Biochemicals
CELLULOSE

IT Miscellaneous Descriptors
CELLULOSE PRODUCER; DNA TRANSFER METHOD; PLASMID PRK248;
 PLASMID PUCD2

ORGN Super Taxa
Acetobacteraceae: Eubacteria, Bacteria; *Enterobacteriaceae*: Eubacteria,
 Bacteria

ORGN Organism Name
Acetobacter xylinum (*Acetobacteraceae*); *Escherichia coli* (*Enterobacteriaceae*)

ORGN Organism Superterms
 bacteria; eubacteria; microorganisms

RN 9004-34-6 (**CELLULOSE**)

L114 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1977:176216 BIOSIS

DN BA63:71080

TI ISOLATION AND CHARACTERIZATION OF 2 STRAINS OF **STREPTOMYCES** ABLE TO METABOLIZE NATURAL POLY SACCHARIDES INCLUDING MANNAN.

AU CHARPENTIER M; PERCHERON F

SO ANN MICROBIOL (PARIS), (1976 (RECD 1977)) 127B (3), 363-372.
 CODEN: ANMBCM. ISSN: 0300-5410.

FS BA; OLD

LA Unavailable

AB Two strains of aerobic and mesophilic microorganisms were isolated from palm-tree plantation sand. They grew on the insoluble polysaccharides mannan, **cellulose** and chitin as the only C source. This lytic activity was used for the purification of the 2 strains. The morphology of the organisms and the presence of LL-diaminopimelic acid in their cell-wall are characteristic of the genus **streptomyces**. Their specific polysaccharidase activity toward insoluble and natural .beta.- and .alpha.-glycans (mannan, **cellulose**, chitin, pectin and starch) and the formation of soluble saccharides (mannobiose, cellobiose, .beta.-D-N-acetylglucosamine, galacturonic acid and maltose) were characterized. Antagonistic or synergistic effect on pathogenic bacteria [*Staphylococcus aureus*, *Klebsiella pneumoniae* and **Pseudomonas aeruginosa**] and certain phytopathogenic microorganisms was exhibited; only in the latter case was a weak lytic activity exerted by the 3 **streptomyces** isolates, but 1 strain stimulated *Colletotrichum lindemuthianum* and *Phialophora cinerescens*. The 2 strains were sensitive to **tetracycline** and **streptomycin**, but they were resistant to gentamicin, kanamycin, **erythromycin** and .beta.-lactam antibiotics (penicillin and cephalosporin); they possessed a .beta.-lactamase bound to the cell membrane.

CC Biochemistry - Gases 10012
 Biochemical Methods - Proteins, Peptides and Amino Acids 10054
 Biochemical Studies - General 10060

Biochemical Studies - Proteins, Peptides and Amino Acids 10064
 Biochemical Studies - Carbohydrates 10068
 Biophysics - Membrane Phenomena *10508
 Enzymes - Methods 10804
 Enzymes - Physiological Studies *10808
 Metabolism - General Metabolism; Metabolic Pathways *13002
 Metabolism - Energy and Respiratory Metabolism *13003
 Metabolism - Carbohydrates *13004
 Pharmacology - General 22002
 Morphology and Cytology of Bacteria *30500
 Physiology and Biochemistry of Bacteria *31000
 Microbiological Apparatus, Methods and Media 32000
 Medical and Clinical Microbiology - Bacteriology 36002
 Chemotherapy - Antibacterial Agents 38504
 Soil Microbiology 40000
 Horticulture - Tropical and Subtropical Fruits and Nuts; Plantation Crops 53004
 Phytopathology - Diseases Caused by Fungi 54502
BC Actinomycetales 06200
 Eubakteriales 07200
 Fungi Imperfecti or Deuteromycetes 15500
 Palmae 25380
IT Miscellaneous Descriptors
 STAPHYLOCOCCUS-AUREUS KLEBSIELLA-PNEUMONIAE PSEUDOMONAS
 -AERUGINOSA COLLETOTRICHUM-LINDEMUTHIANUM PHIALOPHORA-CINERESCENS PALM
 TREE PLANTATION SAND DI AMINO PIMELIC-ACID TETRACYCLINE
 STREPTOMYCIN GENTAMICIN KANAMYCIN ERYTHROMYCIN
 PENICILLIN CEPHALOSPORIN ANTI INFECT-DRUGS BETA LACTAMASE
RN 57-92-1 (STREPTOMYCIN)
 60-54-8 (TETRACYCLINE)
 114-07-8 (ERYTHROMYCIN)
 583-93-7 (DI AMINO PIMELIC-ACID)
 1403-66-3 (GENTAMICIN)
 1406-05-9 (PENICILLIN)
 8063-07-8 (KANAMYCIN)
 9073-60-3 (BETA LACTAMASE)
 11111-12-9 (CEPHALOSPORIN)
 9036-88-8Q, 51395-96-1Q (MANNAN)

L114 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2000 BIOSIS
AN 1976:229113 BIOSIS
DN BA62:59113
TI ANTI BACTERIAL PROPERTIES OF A NEW NONWOVEN **BANDAGE** BIOCEL-NFA
 NITRO FURAN.
AU TUROVETS I H; MIKHNOVS'KA N D; BABYKA A V; FEDOROVA L H; KUTSENOK V A
SO MIKROBIOL ZH (KIEV), (1975) 37 (2), 228-231.
 CODEN: MZUKAV. ISSN: 0026-3664.
FS BA; OLD
LA Unavailable
AB Biocel-NFA consists of cotton or bleached wood **cellulose** and a new type of chemically modified fiber treated with 5-nitrofuran preparations. Biocel-NFA had a bactericidal effect on Staphylococcus aureus 209 and 1, Bacterium [Escherichia] coli, Proteus vulgaris, **Pseudomonas** pyocyaneus (aeruginosa) and Clostridium perfringens, all isolated from postoperative (human) patients. Biocel-NFA was also more effective against gram-negative and -positive bacteria than levomycin, **erythromycin**, **tetracycline**, **chlortetracycline** and monocycin.
CC Biochemical Studies - General 10060
 Biochemical Studies - Carbohydrates 10068
 Anatomy and Histology, General and Comparative - Surgery 11105
 Pathology, General and Miscellaneous - Therapy *12512
 Pharmacology - General *22002
 Physiology and Biochemistry of Bacteria 31000
 Microbiological Apparatus, Methods and Media 32000
 Medical and Clinical Microbiology - General; Methods and Techniques 36001

Medical and Clinical Microbiology - Bacteriology *36002
 Chemotherapy - Antibacterial Agents *38504
 Plant Physiology, Biochemistry and Biophysics - Chemical Constituents
 51522
 Forestry and Forest Products 53500
BC **Bacteria - Unspecified 06000**
Eubacteriales 07200
Pseudomonadales 08200
 Spermatophyta 25000
 Malvaceae 26330
 Hominidae 86215
IT **Miscellaneous Descriptors**
 STAPHYLOCOCCUS-AUREUS ESCHERICHIA-COLI PROTEUS-VULGARIS
PSEUDOMONAS-AERUGINOSA CLOSTRIDIUM-PERFRINGENS HUMAN BACTERIA
 COTTON WOOD CELLULOSE LEVOMYCETIN ERYTHROMYCIN
 TETRACYCLINE MONOMYCIN ANTI INFECT-DRUGS
RN **56-75-7 (LEVOMYCETIN)**
60-54-8 (TETRACYCLINE)
114-07-8 (ERYTHROMYCIN)
9004-34-6 (CELLULOSE)
 54597-56-7 (MONOMYCIN)
 59-87-0Q, 609-39-2Q, 27194-24-7Q (NITROFURAN)

=> d his l115-

(FILE 'BIOSIS' ENTERED AT 16:05:45 ON 05 JUN 2000)

FILE 'HCAPLUS' ENTERED AT 16:06:05 ON 05 JUN 2000
 E RHIZOB/CT

L115 7346 S E4-E58
 L116 15051 S (L5 OR L10 OR ?CELLULOS? OR CELLULOS?/SC,SX) AND (?BACTER? OR
 L117 198 S L116 AND L36-L49,L52
 L118 17 S L116 AND ?CELL?(L)DIVI?(L)(INHIBIT? OR BLOCK? OR PREVENT?)
 L119 214 S L117,L118
 L120 2 S L119 AND (MICROFIBRIL? OR MICRO(L)FIBRIL?)
 L121 9 S L119 AND 43/SC,SX
 L122 9 S L120,L121 NOT L56
 L123 7024 S L5 (L) (PREP/RL OR BMF/RL OR IMF/RL)
 L124 2 S L123 AND L119
 L125 2 S L5/P AND L119
 L126 0 S L124,L125 AND L122
 L127 1 S L124,L125 NOT L56
 L128 17 S L119 AND 16/SC,SX
 L129 15 S L128 NOT L56,L122,L125
 L130 2 S L129 AND (BROTH OR TEXTILE)/TI

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 FILE LAST UPDATED: 4 Jun 2000 (20000604/ED)

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=> d all hitstr tot l130

L130 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2000 ACS

AN 1996:449705 HCAPLUS

DN 125:84810

TI Fermentation broth composition

IN Mathias, Rolland; Akira, Fujikawa

PA Daicel Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C12N001-02

ICS C12N001-38

CC 16-1 (Fermentation and Bioindustrial Chemistry)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-----------------------------------|------|----------|-----------------|----------|
| PI | EP 718399 | A1 | 19960626 | EP 1994-402983 | 19941221 |
| | R: AT, DE, ES, FR, GB, IT, NL, PT | | | | |
| | JP 08224077 | A2 | 19960903 | JP 1995-331595 | 19951220 |

PRAI EP 1994-402983 19941221

AB A fermented broth compn. contg. a biodegradable filamentous org. substance having an av. fiber diam. of 0.7-10 .mu.m and a filamentous actinomycetes is claimed. By sepg. and purifying this fermented broth, the target substance is obtained. Filtration can be effected at an extremely high efficiency without using a filter aid. The filtration residue is composed mainly of harmless org. materials and thus reusable as fertilizers, feeds, etc. When the filtration residue is incinerated, only a small amt. of ash is formed, which reduces the load on the incinerator.

ST actinomycete fermn cellulose fiber filtration; fungi filamentous fermn cellulose fiber filtration; mycelium fermn cellulose fiber filtration

IT Actinomycetes

Cephalosporium acremonium

Ergot

Fermentation

Filtration

Penicillium notatum

Saccharopolyspora erythraea

Streptomyces aureofaciens

(cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT Ergot

(Claviceps purpurea, cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT Alkaloids, preparation

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(ergotaman, cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT Fungi

(filamentous, cellulose fibers in fermns. with filamentous microorganisms to improve broth filtration)

IT 60-54-8P, Tetracycline 61-24-5P, Cephalosporin C

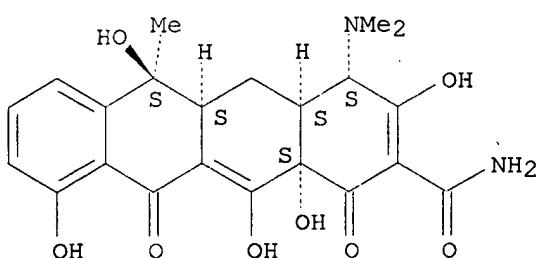
61-33-6P, Penicillin G, preparation 114-07-8P,
Erythromycin 511-09-1P, Ergokryptine
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL
 (Biological study); PREP (Preparation)
 (cellulose fibers in fermns. with filamentous
 microorganisms to improve broth filtration)

IT 9004-34-6, Cellulose, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (cellulose fibers in fermns. with filamentous
 microorganisms to improve broth filtration)

IT 60-54-8P, Tetracycline 114-07-8P,
Erythromycin
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL
 (Biological study); PREP (Preparation)
 (cellulose fibers in fermns. with filamentous
 microorganisms to improve broth filtration)

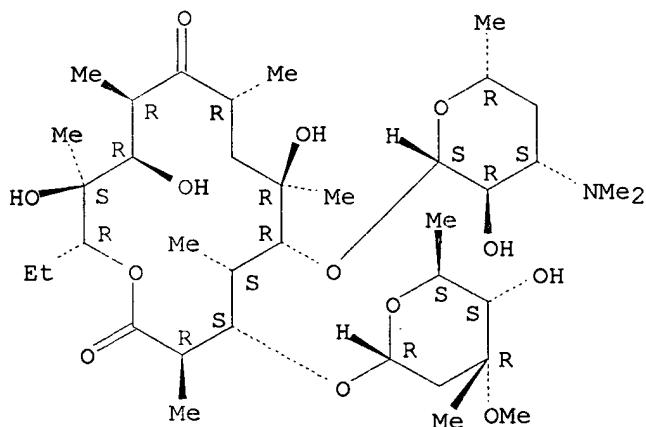
RN 60-54-8 HCPLUS
 CN 2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-
 3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-, (4S,4aS,5aS,6S,12aS)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 114-07-8 HCPLUS
 CN Erythromycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 9004-34-6, Cellulose, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (cellulose fibers in fermns. with filamentous
 microorganisms to improve broth filtration)

RN 9004-34-6 HCPLUS
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L130 ANSWER 2 OF 2 HCPLUS COPYRIGHT 2000 ACS
 AN 1990:177004 HCPLUS
 DN 112:177004
 TI Immobilization of **microorganisms** on **textiles** for use
 in repeated batch fermentation
 IN Yamazaki, Hiroshi; Joshi, Sushama
 PA Can.
 SO U.S., 8 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C12P035-06
 ICS C12P017-18; C12P007-14; C12N011-02
 NCL 435049000
 CC 16-1 (Fermentation and Bioindustrial Chemistry)
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | US 4898817 | A | 19900206 | US 1986-874388 | 19860616 |
| | CA 1267858 | A1 | 19900417 | CA 1985-494718 | 19851106 |

PRAI CA 1985-494718 19851106

AB **Microorganisms** immobilized on cloth supports (e.g. cotton, cellulose acetate) by adsorption are used for batch fermn. procedures. This simplifies the recovery of the fermn. liquor from the fermn. vessel by filtration. The cloth retained in the fermn. vessel can then be resuspended in new fermn. medium without the need to generate new starter cultures. Several types of cloth were tested with several types of **microorganism**. Cotton proved to be the best support for all of the **microorganisms** tested. *Saccharomyces cerevisiae* immobilized on cotton were used to ferment starch or Jerusalem artichoke tuber hydrolyzates (both .apprx.10% fermentable hexoses) to EtOH at 30.degree. in a stirred-tank fermentor (250 mL) at a stirring rate that ensured an adequate supply of nutrients to the immobilized yeast without dislodging cells from the cloth. For both substrates the productivity was 20 g ethanol/fermentor/h. The time to 90% conversion of fermentable sugars was 4 h for artichoke hydrolyzate and 6 h for starch.

ST cloth immobilized **microorganism** fermn; *Saccharomyces* cotton immobilization ethanol fermn

IT Fermentation
 (immobilization of **microorganisms** for, adsorption into cloth for)

IT *Bacillus amyloliquefaciens*
Bacillus megaterium
Bacillus subtilis
Brevibacterium ammoniagenes
Corynebacterium glutamicum
Escherichia coli
Kluyveromyces fragilis
Kluyveromyces marxianus

Microorganism

Rhizobium meliloti
Saccharomyces diastaticus
Saccharomyces uvarum
Schwanniomyces alluvius
Streptomyces cattleya
Streptomyces clavuligerus
Streptomyces olivochromogenes

Yeast
 (immobilized on textiles, fermn. using)

IT Acetate fibers, biological studies
 Polyester fibers, uses and miscellaneous
 (**microorganism** immobilization on, fermn. using)

IT Textiles
 (**microorganisms** immobilized on, fermn. using)

IT Immobilization, biochemical

(of **microorganisms** on textiles for batch fermn.)

IT Textiles
 (cotton, **microorganism** immobilization on, fermn. using)

IT Acetate fibers, biological studies
 (triacetate, **microorganism** immobilization on, fermn. using)

IT 9004-35-7
 (acetate fibers, **microorganism** immobilization on, fermn.
 using)

IT 9004-35-7
 (acetate fibers, triacetate, **microorganism** immobilization on,
 fermn. using)

IT 64-17-5P, Ethanol, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
 (Preparation)
 (manuf. of, with cloth-immobilized Kluyveromyces or Saccharomyces)

IT 59995-64-1P, Thienamycin
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
 (Preparation)
 (manuf. of, with cloth-immobilized Streptomyces cattleva)

IT 61-24-5P, Cephalosporin C
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
 (Preparation)
 (manuf. of, with cloth-immobilized Streptomyces clavuligerus)

IT 9004-35-7
 (acetate fibers, **microorganism** immobilization on, fermn.
 using)

RN 9004-35-7 HCPLUS

CN Cellulose, acetate (9CI) (CA INDEX NAME)

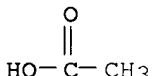
CM 1

CRN 9004-34-6
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-19-7
 CMF C2 H4 O2



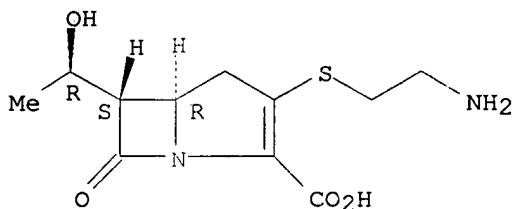
(acetate fibers, triacetate, **microorganism** immobilization on,
 fermn. using)

IT 59995-64-1P, Thienamycin
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
 (Preparation)
 (manuf. of, with cloth-immobilized Streptomyces cattleva)

RN 59995-64-1 HCPLUS

CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(2-aminoethyl)thio]-6-
 [(1R)-1-hydroxyethyl]-7-oxo-, (5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> fil wpids

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(FILE 'HCAPLUS' ENTERED AT 16:06:05 ON 05 JUN 2000)

FILE 'HCAPLUS' ENTERED AT 16:20:05 ON 05 JUN 2000

FILE 'WPIDS' ENTERED AT 16:20:22 ON 05 JUN 2000

| | |
|------|--|
| L131 | 1182 S C08B015/IC, ICM, ICS, ICA, ICI |
| L132 | 2 S L131 AND L74-L92 |
| L133 | 56 S L131 AND ?CELL? (L) (INHIBIT? OR BLOCK? OR PREVENT?) |
| L134 | 15 S L131 AND (V00# OR V02# OR V03# OR V04# OR V05# OR V06# OR V07 |
| L135 | 72 S L132-L134 |
| L136 | 9 S L135 AND ?BACTER? |
| L137 | 3 SEA L135 AND (V500 OR V540 OR V570)/M0,M1,M2,M3,M4,M5,M6 |
| L138 | 0 S L135 AND (B04-F10? OR C04-F10? OR B04-B02B OR C04-B02B OR B04 |
| L139 | 11 S L136, L137 |
| L140 | 2 S L135 AND (MICROFIBRIL? OR MICRO(L) FIBRIL?) |
| L141 | 2 S L135 AND (MICROFIBR? OR MICROFIBER? OR MICRO(L) (FIBR? OR FIBE |
| L142 | 10 S L139-L141 NOT L98 |
| L143 | 4 S L142 AND (OLIGOPEPTIDE OR PYROGEN OR FORTIMYCIN OR AGAROSE)/T |
| L144 | 6 S L142 NOT L143 |

FILE 'WPIDS' ENTERED AT 16:30:20 ON 05 JUN 2000

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L144 ANSWER 1 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-399069 [34] WPIDS
DNC C1998-120910

TI Treatment of gelatinous **bacterial cellulose** to obtain soft dietary fibre - by treating to bring into **microfibre** form, and then heat treating.
 DC A11 A97 D13
 IN TAMMARATE, P
 PA (SCHU-I) SCHULZE H K; (THRE-N) THAILAND RES FUND
 CYC 80
 PI WO 9830594 A1 19980716 (199834)* EN 21p C08B015-00 <--
 RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA
 PT SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
 GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
 MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN
 YU ZW
 AU 9854684 A 19980803 (199850) C08B015-00 <--
 US 5962676 A 19991005 (199948) C08B015-00 <--
 ADT WO 9830594 A1 WO 1998-AU9 19980112; AU 9854684 A AU 1998-54684 19980112;
 US 5962676 A US 1997-782735 19970113
 FDT AU 9854684 A Based on WO 9830594
 PRAI US 1997-782735 19970113
 IC ICM C08B015-00
 ICS A23L001-054; D21C005-00
 AB WO 9830594 A UPAB: 19980826
 Gelatinous **bacterial cellulose** (I) is treated by: (a)
 treating to bring it into **micro-fibre** form (II); and
 (b) heating (II) (i) to soften the material and then substantially
 evaporate any remaining water, or (ii) at above 100 deg. C to modify (II)
 and **inhibit** hardening of the resultant dried product.
 USE - Product is of use as a dietary **microfibre** that is not
 digested in the gastrointestinal tract.
 ADVANTAGE - When (I) is dried it often tends to become hard and
 horn-like, limiting its use; it is now found that the hardening is not as
 previously thought a property of the microstructure of the
 cellulose itself; the heating of step (b) **inhibits**
 hydrogen bonding and denatures **micro-fibril** bonds, and
 provides a softer product having good swelling property. Washing
 procedures also remove substances that cause hardening
 Dwg. 0/0
 FS CPI
 FA AB
 MC CPI: A03-A05; A10-E05; A12-W09; D03-H01T1

 L144 ANSWER 2 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1995-248047 [33] WPIDS
 CR 1997-506086 [47]
 DNC C1995-113731
 TI New alkali treated bagasse used as livestock feed - is prep'd. by softening
 a bagasse using calcium oxide.
 DC C04 D13 D16 D17 P14
 IN CHAEN, H; IRITANI, S; MITSUHASHI, M; MIYAKE, T
 PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU
 CYC 8
 PI GB 2285806 A 19950726 (199533)* 35p C08B015-00 <--
 AU 9455057 A 19950713 (199535) A23K001-12
 NZ 250358 A 19950828 (199540) A23K001-14
 BR 9405265 A 19950801 (199544) C12P007-14
 JP 07231754 A 19950905 (199544) 9p A23K001-175
 ZA 9410118 A 19951129 (199601) 33p A01K000-00
 US 5545418 A 19960813 (199638) 8p A23K001-12
 US 5622859 A 19970422 (199722) 8p A01N063-00
 CN 1109280 A 19951004 (199734) C13D001-02
 GB 2285806 B 19980429 (199819) C08B015-00 <--
 AU 689088 B 19980326 (199826) A23K001-12
 ADT GB 2285806 A GB 1994-25675 19941220; AU 9455057 A AU 1994-55057 19940211;
 NZ 250858 A NZ 1994-250858 19940210; BR 9405265 A BR 1994-5265 19941227;
 JP 07231754 A JP 1994-336885 19941227; ZA 9410118 A ZA 1994-10118

19941220; US 5545418 A US 1994-364489 19941227; US 5622859 A Cont of US 1994-364489 19941227, US 1996-623007 19960328; CN 1109280 A CN 1994-113455 19941226; GB 2285806 B GB 1994-25675 19941220; AU 689088 B AU 1994-55057 19940211

FDT US 5622859 A Cont of US 5545418; AU 689088 B Previous Publ. AU 9455057
 PRAI JP 1993-346818 19931227
 IC ICM A01K000-00; A01N063-00; A23K001-12; A23K001-14; A23K001-175;
 C08B015-00; C12P007-14; C13D001-02
 ICS A23B007-10; A23B007-157; A23K001-00; A23K003-03; A23L001-48;
 A23L003-3463; C05F005-00; C08H005-04; C12N001-00; C12N001-12;
 C12N001-22; C12R001-01; C12S003-02; C12S003-04; D21B001-38;
 D21H011-12; D21H011-16; D21H011-20
 ICA C12N001-20
 ICI C12R001:01, C12R001:225, C12R001:23, C12R001:24, C12R001:25, C12R001:26;
 C12R001:01, C12R001:225, C12R001:23, C12R001:24, C12R001:25, C12R001:
 AB GB 2285806 A UPAB: 19971125
 Alkali-treated bagasse (ATB) opt. contg. a nutrient source, prepd. by softening a bagasse while **preventing** decomposition of **cellulose** and **hemicellulose** is new. Also claimed are:
 (a) a process for softening bagasse comprising incorporating CaO into a bagasse opt. with NaOH under the coexistence of water, while **preventing** decomposition of **cellulose** and **hemicellulose**; (b) a fermented bagasse feed obtd. by incorporating a nutrient source (NS) and a seed culture of a lactic acid bacterium into the ATB and fermenting; and (c) Enterococcus faecium HL-S (FERM BP4504) **bacterium** capable of proliferating in an alkaline nutrient culture medium of pH at least 9.5.
 USE - Bagasse is a squeezed waste of sugar cane contg. **cellulose** (CE) and **hemicellulose** (HC). It has been utilised in part as a fuel source. ATB is useful as an animal feed for livestock pref. ruminants such as cattle or monogastric animals such as pigs or poultry. It is also used as an organic fertiliser.

ADVANTAGE - The ATB feed has good taste and is of high quality. It is produced easily within a relatively short period of time. The ATB saves sugar refineries from the difficulties of treating bagasse which was previously considered as an unutilised industrial waste, and livestock farming industries from the shortage of roughage. The prepn. of ATB establishes a novel technology to save environmental disruption, an overflowing population and a food crisis by allowing prodn. of feeds for livestock and milk prods. from bagasse without any competition without foods. Previously bagasse could not be used as an animal feed due to the high lignin content.

Dwg. 0/0

FS CPI GMPI
 FA AB
 MC CPI: C04-A10J; C14-E11; C14-S12; D03-G04; D05-A04A; D05-H04; D06-A; D06-H
 ABEQ US 5545418 A UPAB: 19960924
 An alkali-treated bagasse, which is prepd. by softening a bagasse with calcium oxide or with a mixt. of calcium oxide and sodium hydroxide while **preventing** the substantial decomposition of **cellulose** and **hemicellulose**.

Dwg. 0/0

ABEQ US 5622859 A UPAB: 19970530
 A biologically pure Enterococcus faecium FERM BP-4504, which is a bacterium capable of proliferating in an alkaline nutrient culture medium having a pH not less than 9.5.

Dwg. 0/0

ABEQ GB 2285806 B UPAB: 19980512
 Alkali-treated bagasse (ATB) opt. contg. a nutrient source, prepd. by softening a bagasse while **preventing** decomposition of **cellulose** and **hemicellulose** is new. Also claimed are:
 (a) a process for softening bagasse comprising incorporating CaO into a bagasse opt. with NaOH under the coexistence of water, while **preventing** decomposition of **cellulose** and **hemicellulose**; (b) a fermented bagasse feed obtd. by incorporating a nutrient source (NS) and a seed culture of a lactic acid

bacterium into the ATB and fermenting; and (c) Enterococcus faecium HL-S (FERM BP4504) bacterium capable of proliferating in an alkaline nutrient culture medium of pH at least 9.5.

USE - Bagasse is a squeezed waste of sugar cane contg. cellulose (CE) and hemicellulose (HC). It has been utilised in part as a fuel source. ATB is useful as an animal feed for livestock pref. ruminants such as cattle or monogastric animals such as pigs or poultry. It is also used as an organic fertiliser.

ADVANTAGE - The ATB feed has good taste and is of high quality. It is produced easily within a relatively short period of time. The ATB saves sugar refineries from the difficulties of treating bagasse which was previously considered as an unutilised industrial waste, and livestock farming industries from the shortage of roughage. The prepn. of ATB establishes a novel technology to save environmental disruption, an overflowing population and a food crisis by allowing prodn. of feeds for livestock and milk prods. from bagasse without any competition without foods. Previously bagasse could not be used as an animal feed due to the high lignin content.

Dwg. 0/0

| | | | |
|------|---|------------------------------|-------------------------|
| L144 | ANSWER 3 OF 6 | WPIDS COPYRIGHT 2000 | DERWENT INFORMATION LTD |
| AN | 1994-169894 [21] | WPIDS | |
| CR | 1995-216784 [29] | | |
| DNC | C1994-077641 | | |
| TI | Prodn. of saccharide carboxylic acid by oxidising sugar with Pseudo-gluconobacter - including new cpds. useful as sweeteners, clathrating agents for drugs, anticancer agents, etc. of good water solubility and stability against enzymes. | | |
| DC | B03 B04 B05 C03 D13 D16 D21 E13 | | |
| IN | ISHIGURO, T; NOGAMI, I; OKA, M; YAMAGUCHI, T; NAKAGAWA, Y; UDA, Y; YAMAUCHI, T | | |
| PA | (TAKE) TAKEDA CHEM IND LTD; (TAKE) TAKEDA PHARM IND CO LTD | | |
| CYC | 25 | | |
| PI | EP 599646 | A2 19940601 (199421)* EN 44p | C12P019-02 |
| | R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE | | |
| | AU 9351948 A 19940630 (199430) | | C07H007-033 |
| | CA 2110111 A 19940528 (199431) | | C12P019-00 |
| | NZ 250284 A 19940927 (199438) | | C12P019-00 |
| | JP 07076594 A 19950320 (199520) | 28p | C07H007-033 |
| | US 5434061 A 19950718 (199534) | 30p | C12P019-22 |
| | EP 599646 A3 19950419 (199545) | | C12P019-02 |
| | AU 666234 B 19960201 (199612) | | C07H007-033 |
| | TW 293036 A 19961211 (199714) | | C07H013-02 |
| | CN 1093407 A 19941012 (199717) | | C12P007-58 |
| | US 5629411 A 19970513 (199725) | 17p | C07H015-24 |
| | US 5635610 A 19970603 (199728) | 29p | C07H003-00 |
| | US 5635611 A 19970603 (199728) | 29p | C07H003-00 |
| | SG 48777 A1 19980518 (199834) | | C12P019-02 |
| | US 5840881 A 19981124 (199903) | | C08B037-16 |
| | PH 30166 A 19970121 (199953) | | C12P019-00 |
| ADT | EP 599646 A2 EP 1993-309412 19931125; AU 9351948 A AU 1993-51948 19931125; CA 2110111 A CA 1993-2110111 19931126; NZ 250284 A NZ 1993-250284 19931125; JP 07076594 A JP 1993-288284 19931117; US 5434061 A US 1993-152122 19931115; EP 599646 A3 EP 1993-309412 19931125; AU 666234 B AU 1993-51948 19931125; TW 293036 A TW 1993-109415 19931110; CN 1093407 A CN 1993-114961 19931126; US 5629411 A Div ex US 1993-152122 19931115, US 1995-419393 19950410; US 5635610 A Div ex US 1993-152122 19931115, US 1995-419394 19950410; US 5635611 A Div ex US 1993-152122 19931115, US 1995-419397 19950410; SG 48777 A1 SG 1996-1582 19931125; US 5840881 A CIP of US 1993-152122 19931115, CIP of US 1994-353326 19941205, US 1995-437227 19950508; PH 30166 A PH 1993-47325 19931126 | | |
| FDT | AU 666234 B Previous Publ. AU 9351948; US 5629411 A Div ex US 5434061; US 5635610 A Div ex US 5434061; US 5635611 A Div ex US 5434061; US 5840881 A CIP of US 5434061 | | |
| PRAI | JP 1993-173121 19930713; JP 1992-318807 19921127; JP 1993-50652 19930311; JP 1993-305597 19931206 | | |

REP No-SR.Pub; EP 150085; EP 221707; EP 295861; EP 51707
 ICM C07H003-00; C07H007-033; C07H013-02; C07H015-24; C08B037-16;
 C12P007-58; C12P019-00; C12P019-02; C12P019-22
 ICS A61K033-26; C07H005-00; C07H013-12; C07H015-00; C07H015-12;
 C07H015-22; C07H015-256; C07H017-04; C07H019-04; C07J017-00;
C08B015-02; C08B031-16; C08B031-18; C08B037-00; C08B037-02;
 C12N001-20; C12P019-04; C12P019-12; C12P019-14; C12P019-56;
 C12R001-01
 ICA A23L001-236; A61K031-70
 ICI C12P019:00, C12R001:01; C12P019-00, C12R001:01; C12P019-00, C12R001:01;
 C12P019-00, C12R001:01; C12P019-56, C12R001:01
 AB EP 599646AN 2 UPAB: 19991215
 Prodn. of saccharide carboxylic acid (A), or its salts, comprises treating a hydroxymethyl and/or hemiacetal OH-contg. monosaccharide deriv., oligo- or poly-saccharide (or derivs.) with a **Pseudogluconobacter** microorganism (or derived cell preparation) able to oxidise hydroxymethyl and/or hemiacetal OH-attached C to COOH.
 Also new are (1) (A) produced by oxidising at least 1 CH₂OH gp. of palatinose; D-trehalose; maltosyl-beta-cyclodextrin; 2-O-alpha-D-glucopyranosyl-L-ascorbic acid; streptozotocin; heptulose; maltodextrins (I); steviol glycosides (II); validamycin A; mogroside or dextran (including complexes of the acid with a metal salt) or by oxidn. of at least 1 hemiacetal OH-attached C (including complexes of the acid with a metal salt) and (2) prodn. of dextranyl-glucuronic acid-Fe hydroxide complex (III) by reacting dextranyl glucuronic acid with Fe hydroxide sol.
 R1 = beta-Glc-2-beta-Glc; beta-Glc(3-beta-Glc)-2-beta-Glc;
 beta-Glc-2-alpha-Rha; beta-Glc or -beta-Glc(3-beta-Glc)-2-alpha-Rha; R2 = beta-Glc or beta-Glc-2-beta-Glc.
 USE/ADVANTAGE - (III), and similar Fe derivs. of dextran carboxylic acid, are useful in Fe supplementation (anti-anaemics) in animals. (A) derived from stevioside glycosides and some other sugars are intense sweeteners (useful in low calorie foods, beverages, etc. and for improving palatability of drugs); those from maltosyl beta-cyclodextrins from clathrates of good water solubility with e.g. prostaglandins, salts of some (A) with Ca, Mg and Fe can be used to improve absorption of these ions (e.g. for preventing osteoporosis); (A) from trehalose are humectants and stabilisers for antibodies; those from D-glucosamine are high moisture retention cosmetic bases, those from nucleosides are flavourings; those from streptozotocin are anticancer and antimicrobial agents; those from Validamycin are agricultural fungicides and those from ascorbic acid are antioxidants. P. saccharoketogenes oxidises a wide range of substrates to (A) with good yield and selectivity. Compared with the sugar starting materials (A) have better solubility, lower toxicity and better resistance to enzymes. They also have good disintegrability and biodegradation.
 Dwg. 0/14
 FS CPI
 FA AB; DCN
 MC CPI: B02-V; C02-V; B03-F; C03-F; B04-C02; C04-C02; B04-C02C; C04-C02C;
 D03-G01; D03-H01G; D03-H01P; D03-H01T3; D05-C02; D05-C09; D05-H11;
 D08-B10; E05-L02A; E07-A02H
 ABEQ US 5434061 A UPAB: 19950904
 Prodn. of carbohydrate carboxylic acids and their salts comprises propagation of a **Pseudogluconobacter** saccharoketogenes strain in a nutrient medium contg. a monosaccharide, oligosaccharide or polysaccharide contg. a CH₂OH gp., and/or a corresp. hemiacetal; and recovery of the carboxylic acid produced. Or a cell prepns. from the above species is used to oxidise the sugar or its hemiacetal.
 USE - The prods. are carbohydrate carboxylic acids having improved solubility in water and resistance to enzymic degradation, and serve as carriers for nutritional or medicinal metal derivs., sweetening aids and flavour additives.
 ADVANTAGE - The process is selective, giving high yields of sugar carboxylic acids.
 Dwg. 0/14
 ABEQ US 5629411 A UPAB: 19970619

A saccharide carboxylic acid such that at least one hydroxymethyl group of a steviol glycoside of formula (II) wherein R1 = -beta-Glc-2-beta-Glc, -beta-Glc(3-beta-glycine)-2-beta-Glc, -beta-Glc-2-alpha-Rha, -beta-Glc(3-beta Glc)-2-alpha-Rha or -beta-Glc; and R2 = -beta-Glc or -beta-Glc-2-beta-Glc

has been oxidized to carboxyl group or a salt thereof.

Dwg. 0/14

ABEQ US 5635610 A UPAB: 19970709

A saccharide carboxylic acid such that at least one hydroxymethyl group of palatinose has been oxidised to carboxyl group or a salt is new.

Dwg. 0/14

ABEQ US 5635611 A UPAB: 19970709

A saccharide carboxylic acid such that at least one hydroxymethyl group of dextran has been oxidized to carboxyl group or a salt thereof.

Dwg. 0/14

L144 ANSWER 4 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1990-312265 [41] WPIDS
 CR 1990-253424 [33]; 1990-282151 [37]; 1991-294954 [40]; 1992-016071 [02];
 1992-064939 [08]; 1992-131876 [16]; 1994-150903 [18]
 DNN N1992-012156 DNC C1990-135096
 TI Super-absorber compsn. which gels and crosslinks on hydration - comprising carboxylic acid, branched complex carbohydrate, and crosslinking agent.
 DC A96 B07 D22 F07 P32 P34
 IN WALLACH, D F H; CHANG, A
 PA (MICR-N) MICRO VESICULAR SYS; (MICR-N) MICRO VESICULAR SYSTEMS INC;
 (MICR-N) MICRO VESICULAR SYSTEMS INC
 CYC 19
 PI US 4959341 A 19900925 (199041)*
 AU 9052676 A 19901009 (199102)
 AU 9052841 A 19901009 (199102)
 ZA 9001853 A 19910828 (199139)
 EP 462178 A 19911227 (199201)
 R: AT BE CH DE ES FR GB IT LI LU
 BR 9007210 A 19920218 (199212)
 BR 9007212 A 19920324 (199217)
 EP 462178 B1 19931006 (199340) EN 7p B01J013-00
 R: AT BE CH DE DK ES FR GB IT LI LU NL SE
 DE 69003810 E 19931111 (199346) B01J013-00
 CA 2049055 C 19940705 (199431) C09K003-00
 JP 07020547 B2 19950308 (199514) 4p B01J020-24
 ADT US 4959341 A US 1989-320944 19890309; ZA 9001853 A ZA 1990-1853 19900309;
 EP 462178 A EP 1990-904542 19900308; EP 462178 B1 EP 1990-904542 19900308,
 WO 1990-US1049 19900308; DE 69003810 E DE 1990-603810 19900308, EP
 1990-904542 19900308, WO 1990-US1049 19900308; CA 2049055 C CA
 1990-2049055 19900308; JP 07020547 B2 JP 1990-504607 19900308, WO
 1990-US1049 19900308
 FDT EP 462178 B1 Based on WO 9010495; DE 69003810 E Based on EP 462178, Based
 on WO 9010495; JP 07020547 B2 Based on JP 04504978, Based on WO 9010495
 PRAI US 1989-320944 19890309
 REP CA 1152483; US 3969280; US 4090013; US 4160063; US 4454055; US 4486335; US
 4548847; US 4610678; US 4786415; US 4812486; US 4826880; 1.Jnl.Ref; EP
 273141; EP 309309
 IC A61F013-15; A61K000-00; B01D015-00; B01J013-00; B01J020-22; B01N020-26;
 B29C000-00; C07C000-00; C08B000-00; C09K003-00
 ICM B01J013-00; B01J020-24; C09K003-00
 ICS A61F013-15; A61K000-00; A61L015-60; B01D015-00; B01J020-22;
 B01J020-26; B01N020-26; B29C000-00; C07C000-00; C08B000-00
 ICA C08B011-12; C08B015-10
 AB US 4959341 A UPAB: 19960610

Synthetic sponge compsn. comprises a non-hydrated mixt. of (a) a carboxylic acid (I) with a substantial hydrophobic region; (b) a branched complex carbohydrate (II); and (c) a separate cross-linking agent (III). The compsn. can be hydrated and cross-linked simultaneously in the presence of a hydrating soln..

USE/ADVANTAGE - The superabsorber, which gels and cross-links as it

hydrates, is completely biodegradable and non-toxic. The compsns. are useful as wound dressings and diapers, etc.; and may also act as carriers or sustained released delivery systems for drugs, and as materials for the entrapment of particulates such as erythrocytes and protein mols etc..
@(6pp DWg.No.0/0)

FS CPI GMPI
FA AB; DCN
MC CPI: A08-D01; A08-D05; A09-A; A12-V01; A12-V03A; B04-B04A6; B04-B04D1;
B04-C02A2; B04-C02E3; B12-M02D; B12-M10A; D09-C03; D09-C04B; D09-C06;
F04-C01

ABEQ EP 462178 B UPAB: 19931129
A method of making a particulate absorbent material comprising the steps of: (A) reacting a carboxylated cellulosic material with (i) a crosslinking agent, and (ii) a hydrophobicity agent; (B) separating the reaction product; and (C) removing water from said reaction product until it is substantially dehydrated and a particulate is formed of said absorbent material.
Dwg.0/0

L144 ANSWER 5 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1989-341376 [47] WPIDS
CR 1994-287140 [36]
DNN N1990-045579 DNC C1989-151267
TI New carboxymethyl polysaccharide ester(s) - used in pharmaceutical, biomedical, food and other industries.
DC A96 A97 B07 D13 D16 D21 D22 G03 P32 P34
IN DELLA VALLE, F; ROMEO, A
PA (FIDI-N) FIDIA SPA; (FIDI-N) FIDIA FARM ITAL DER
CYC 22
PI EP 342557 A 19891123 (198947)* EN 23p
R: BE CH DE ES FR GB IT LI NL SE
WO 8910940 A 19891116 (198948) EN
RW: AT BE CH DE ES FR GB GR IT LI LU NL SE
W: AU DK FI HU JP KR
AU 8935718 A 19891129 (199007)
FI 9000187 A 19900112 (199012)
DK 9000108 A 19900312 (199035)
HU 53127 T 19900928 (199045)
JP 02504164 W 19901129 (199103)
IT 1219942 B 19900524 (199213)
US 5122598 A 19920616 (199227) 17p C08B037-08
HU 208440 B 19931028 (199348) C08B011-12
EP 342557 B1 19941123 (199445) EN 25p C08B011-12
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 68919435 E 19950105 (199506) C08B011-12
ES 2063779 T3 19950116 (199509) C08B011-12
CA 1336087 C 19950627 (199533) C08B011-08
EP 615979 A3 19941228 (199537)
US 5466461 A 19951114 (199551) 15p A61F013-15
IL 90273 A 19951127 (199608) C08B013-00
JP 2958373 B2 19991006 (199947) 19p C08B003-00
ADT EP 342557 A EP 1989-108729 19890512; WO 8910940 A WO 1989-EP520 19890512;
JP 02504164 W JP 1989-505459 19890512; IT 1219942 B IT 1988-47963
19880513; US 5122598 A US 1989-350920 19890512; HU 208440 B HU 1989-3005
19890512, WO 1989-EP520 19890512; EP 342557 B1 EP 1989-108628 19890512; DE
68919435 E DE 1989-619435 19890512, EP 1989-108628 19890512; ES 2063779 T3
EP 1989-108628 19890512; CA 1336087 C CA 1989-599556 19890512; EP 615979
A3 EP 1994-107393 19890512; US 5466461 A Div ex US 1989-350920 19890512,
US 1992-862370 19920402; IL 90273 A IL 1989-90273 19890512; JP 2958373 B2
JP 1989-505459 19890512, WO 1989-EP520 19890512
FDT HU 208440 B Previous Publ. HU 53127, Based on WO 8910940; DE 68919435 E
Based on EP 342557; ES 2063779 T3 Based on EP 342557; EP 615979 A3 Related
to EP 342557; US 5466461 A Div ex US 5122598; JP 2958373 B2 Previous Publ.
JP 02504164, Based on WO 8910940
PRAI IT 1988-47963 19880513
REP No-SR.Pub; DE 957938; EP 104467; EP 251905; US 3092619

IC ICM A61F013-15; C08B003-00; C08B011-08; C08B011-12; C08B013-00;
C08B037-08

ICS A61K007-48; A61K009-08; A61K009-14; A61K009-48; A61K031-72;
A61K031-725; A61K047-00; A61K047-36; A61L017-00; A61L025-00;
A61L031-00; C08B011-00; **C08B015-10**; C08B031-12; C08B031-16;
C08B037-00

AB EP 342557 A UPAB: 19991207

Total or partial esters (I) of carboxymethyl cellulose (CMC), carboxymethyl starch (CMS) or carboxymethyl chitin (CMCH) with aliphatic, araliphatic, cycloaliphatic or heterocyclic alcohols, and salts of the partial esters with bases, are new, except for the partial esters (Ia) of CMC with ethylene glycol or propylene glycol and the partial esters (Ib) of CMS with MeOH or benzyl alcohol.

Also claimed is the use of (I), including (Ia) and (Ib), and their salts in the food industry, paper industry, adhesive prods., printing, textile dyeing prodn. of sanitary, medical and surgical articles, prodn. of (micro) capsules, immobilisation of enzymes, emulsifiers for glazes, polishes, antifoam agents, lactics (sic), and stabilisers in the ceramics and detergent industries.

USE - (I) may be used as active ingredients (when the alcohol or salt component is pharmacologically active) or carriers in pharmaceutical compsns. as cosmetic ingredients, for prodn. of sanitary or surgical threads, films or implants, as gelling agents and stabilisers in foods and drinks, etc. (Previously notified week 8947, reissued week 9007)

Dwg. 0/0

FS CPI GMPI

FA AB

MC CPI: A03-A04A1; A10-E07; A10-E08C; B04-C02; B12-L02; B12-M06; B12-M09;
D03-H01N; D03-H01Q; D05-A01A1; D08-B03; D09-D; D11-B08; D11-B12;
G02-A04A; G02-C; G03-B02A

ABEQ US 5122598 A UPAB: 19930923

Total and partial esters of (a) carboxymethyl **cellulose**, carboxymethyl starch or carboxymethyl chitin with (b) an aliphatic, araliphatic, cycloaliphatic or heterocyclic alcohol and their salts with (in)organic bases are new. Partial esters of **carboxymethylcellulose** with ethylene or propylene glycol and of carboxymethyl starch with methyl or benzyl alcohols are new.

USE - In cosmetics, biodegradable plastics for mfg. medical, surgical and sanitary articles and in pharmaceuticals. Salts of partial esters with amines chosen from alkaloids, peptides, phenothiazines, benzodiazepines, thioxanthenes, hormones, vitamins, anticonvulsants, antipsychotics, antiemetics, anaesthetics, hypnotics, anorexics, tranquillisers, muscle relaxants, coronary vasodilation, antineoplastics, antibiotics, **antibacterials**, antivirals, antimalarials, carbonic anhydride inhibitors, non-steroidal, antiinflammations, vasoconstrictors, cholinergic agonists, cholinergic **blockers**, adrenergic agonists, adrenergic **blockers** and narcotic antagonists.

0/0

ABEQ EP 342557 B UPAB: 19950102

Total esters of acidic polysaccharides chosen from the group formed by **carboxymethylcellulose**, carboxymethyl starch and carboxymethylchitin wherein the carboxy groups of said polysaccharide are esterified with an alcohol of the aliphatic, araliphatic, cycloaliphatic and heterocyclic series, whereby the alcohols of the aliphatic series have a maximum of 34 carbon atoms and are unsubstituted or substituted by one or two functional groups chosen from the groups forms by amino, hydroxy, mercapto, aldehydo, keto, carboxy, hydrocarbyl and dihydrocarbyl amino, ether, ester, thioether, thioester, acetal, ketal carbaloxy groups, carbamidic and substituted carbamidic groups by one or two alkyl groups with the hydrocarbyl radicals in these functionally modified groups having a maximum of 6 carbon atoms, and in which such alcohols of the aliphatic series may be interrupted in the carbon atom chain by heteroatoms chosen from the group formed by oxygen, sulfur and nitrogen, the alcohols of the araliphatic series are those with only one benzene residue and in which the aliphatic chain has a maximum of 4 carbon atoms and in which the benzene residue may be substituted by between 1 and 3 methyl or hydroxy

groups, by halogen atoms, and in which the aliphatic chain may be substituted by one or two functions chosen from the group formed by free amino or mono- or diethyl groups or by pyrrolidine or piperidien groups, and the alcohols of the cycloaliphatic or aliphaticcycloaliphatic or heterocyclic series respectively derive from mono- or polycyclic hydrocarbons with a maximum of 34 carbon atoms and are unsubstituted or substituted by one or more functional groups chosen from the group formed by amino, hydroxy, mercapto, aldehydo, keto, carboxy, hydrocarbyl and dihydrocarbylamino, ether, ester, thioether, thioester, acetal, ketal, carboxy, carbamidic and substituted carbamidic groups by one or two alkyl groups with the hydrocarbyl radicals in these functionally modified groups having a maximum of 6 carbon atoms, and which may be interrupted in the carbon atom chain by heteroatoms chosen from the group formed by -O-, -N-, -NH-, -S- and which may have one or more bonds, including aromatic structures.

Dwg. 0/0

ABEQ US 5466461 A UPAB: 19951221
 Sanitary or surgical articles contain new total or partial esters of acidic polysaccharides viz. COOMecellulose, COOMe starch, COOMechitin, and are prod. by esterifying a quat. ammonium salt of the acidic polysaccharide with up to 34C aliphatic alcohol, an araliphatic alcohol with 1 benzene ring on a 1-4C aliphatic chain, a cycloaliphatic or heterocyclic alcohol with up to 34C atoms, or salt of partial ester with base, with exceptions. The alcohols may be substd. or interrupted by heteroatoms. Articles include film, thread, skin, suture, capsules for implants, and microcapsules for subcutaneous, intramuscular or intravenous injection, solid inserts for subsequent removal, sponges, etc.

ADVANTAGE - Better than acidic polysaccharides now in common use.

Dwg. 0/0

L144 ANSWER 6 OF 6 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 AN 1985-231029 [38] WPIDS
 DNN N1985-173065 DNC C1985-100298
 TI Copper salt modified cellulose fibres for hygienic applications - are adsorbent, deodorising and microbiocidal.
 DC A11 A96 D22 F01 P21 P32 P34
 IN MARINI, I; SUSTMANN, S
 PA (CHES) CHEMIEFASER LENZING AG
 CYC 14
 PI DE 3408131 A 19850912 (198538)* 16p
 EP 159490 A 19851030 (198544) DE
 R: AT BE CH DE FR GB IT LI LU NL SE
 JP 60209066 A 19851021 (198548)
 US 4637820 A 19870120 (198706)
 CA 1240316 A 19880809 (198836)
 ADT DE 3408131 A DE 1984-3408131 19840306; EP 159490 A EP 1980-102236
 19800228; US 4637820 A US 1985-708139 19010101
 PRAI DE 1984-3408131 19840306
 REP No-SR.Pub
 IC A01N025-10; A01N059-20; A41B013-02; A61F013-00; A61L015-00;
 C08B015-05; D01F001-10; D01F002-24; D06M011-04; D06M016-00
 AB DE 3408131 A UPAB: 19930925
 Deodorant, microbiocidal, absorbent fibrous materials are produced from cellulose fibres modified with anionic salt-forming gps. contg. bonded Cu. Gps. bonded to the O atom of the anhydro-glucose units of the cellulose fibre are of formula -PO₃H(-), -(CH₂)_nPO₃H(-), -(CH₂)_nSO₃(-) or -(CH₂)_n-COO(-) in which n = 1-3, and the deg. of substitn. of the cellulose is sufficiently high to bond 0.1-3.0 wt.% Cu.

The fibres pref. have a pH of 4-5 and a water absorbtion of greater than 80%. Prodn. of the modified fibres is claimed by (i) treating anionic salt forming fibres with aq. CuII salt soln. pref. with a soln. of 1-20g/1CuSO₄.5H₂O with pH 4-5, for 1 minute without heating (ii) washing until salt (sulphate)-free, and air-drying.

USE/ADVANTAGE - The materials are fast-coloured blue depending in the amt. of Cu present giving an indication of the hygienic power.

Bacteria e.g. E-coli, Staphylococcus aureus, Candida albicans are prevented from multiplying under optimum conditions. The products develop no characteristic odour after 3 days incubation, and are esp. useful for medical, hygienic and aesthetic purposes e.g. wound dressings, sweat pads, diapers and other absorbent, single-use articles.

0/0

FS CPI GMPI

FA AB

MC CPI: A09-A; A10-E01; A12-V03A; D09-B; D09-C; F02-C01; F03-C02; F03-C02B; F04-C01; F04-E04

ABEQ US 4637820 A UPAB: 19930925

Modified fibrous material comprises viscose fibres modified by anionic gps. of formula -(CH₂)_n COOF attached through O to a viscose anhydroglucosamine unit. Some anionic gps. present are capped by Cu-cations. Viscose fibres bind 0.1-3.0 wt.% of Cu w.r.t. fibres; and n is 1-3.

Pref. degree of substitution by the anionic gp is 0.01-0.3 fibre has pH 4-5. Prod. has water retention capacity more than 80%. Carboxyalkyl anions are carboxymethyl.

USE - In medical, hygienic, cosmetic and aesthetic prods. which have deodorising and microbiostatic properties, for application to areas of the body where perspiration is heavy or where blood or urine are discharged.

=> fil japiro jicst

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FILE 'JICST-EPLUS' ENTERED AT 16:35:37 ON 05 JUN 2000
COPYRIGHT (C) 2000 Japan Science and Technology Corporation (JST)

=> d his l145-

(FILE 'JAPIO, JICST-EPLUS' ENTERED AT 16:30:45 ON 05 JUN 2000)

L145 29480 S CELLULOS?
 L146 2397 S L145 AND (BACTER? OR MICROORGAN? OR MICRO ORGAN? OR ACETOBACT
 L147 2 S L145 AND (ATCC23769 OR ATCC (L) 23769 OR FERM BP4176 OR FERM(L
 L148 137 S L145 AND (PASTERIAN? OR ACETI OR XYLIN? OR RANCEN? OR VENTRIC
 L149 2402 S L146-L148
 L150 0 S L149 AND (CELL (L) DIVI? (L) (INHIBIT? OR BLOCK? OR PREVENT?)
 L151 14 S L36-L49 AND L149
 L152 7 S (TETRACYCLIN? OR ERYTHROMYCIN? OR THIENAMYCIN?) AND L149
 L153 14 S L151, L152
 L154 2 S L153 AND MICROBIAL/TI
 L155 1 S L154 NOT CLINICAL

FILE 'JAPIO, JICST-EPLUS' ENTERED AT 16:35:37 ON 05 JUN 2000

=> d all 1155

L155 ANSWER 1 OF 1 JAPIO COPYRIGHT 2000 JPO
 AN 1998-298204 JAPIO

TI MODIFIED MICROBIAL CELLULOSE

IN ISHIHARA MASARU; YAMANAKA SHIGERU
 PA AJINOMOTO CO INC, JP (CO 000006)

PI JP 10298204 A 19981110 Heisei

AI JP1997-214065 (JP09214065 Heisei) 19970724

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 98, No. 11

IC ICM (6) C08B037-00
 ICS (6) C08B015-00AB PURPOSE: TO BE SOLVED: To obtain a high-modulus **bacterial cellulose** comprising ribbonlike microfibrils changed in length by cultivating **bacteria** capable of producing **cellulose**

outside the cell in a culture medium containing a cytostatic agent or an organic reducing agent.

CONSTITUTION: eria capable of producing **cellulose** outside the cell, comprising, e.g. **Acetobacter**.cntdot.**Pasteurianus** ATcc23769, or FERM-BP-4176, are inoculated in a culture medium containing a cytostatic agent comprising, e.g. a **chloramphenicol** antibiotic, a protein synthesis inhibitor, or an organic compound having a .beta.-lactase inhibitory action, or an organic reducing agent comprising, e.g. dithiothreitol or 2-mercaptoethanol for culturing at a pH of 3 to 9, at 10-40.degree.C for 1 to 100 days, and the produced **cellulose** is taken to give a **bacterial cellulose** containing ribbonlike microfibrils having a width of 10-100 nm and a length of 160-1,000 nm, preferably 50-70 nm.

=> d his l156-

(FILE 'JAPIO, JICST-EPLUS' ENTERED AT 16:35:37 ON 05 JUN 2000)

L156 48 SS L149 AND (MICROFIBRIL? OR MICROFIBER? OR MICRO
L157 47 S L156 NOT L155
L158 0 S L157 AND (ANTIBIOTIC OR ANTIBACTER? OR LACTAMASE OR PROTEIN(L